

**THE FACTORS THAT RELATE TO THE CAREER MATURITY OF  
SCHOOL-GOING GIRLS IN GAUTENG: A CASE STUDY**

by

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## DECLARATION

I declare that The factors that relate to the career maturity of school-going girls in Gauteng: a case study is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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**Sulize Buys**

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**Date**

## **ABSTRACT**

The first aim of this research was to identify the factors that relate to the career maturity of school-going girls and more specifically the factor positive possible selves. Secondly, the study aimed to measure the stability of the construct career maturity as learners progress from one grade to the next without any guidance intervention. The work of Super (1957), Crites (1969) and Langley (1988) formed the theoretical framework for the investigation of the contextual factors such as subject choice and career choice and the biological and psychological factors such as grade, self-efficacy, self-esteem, perceived and actual academic achievement and positive possible selves in relation to career maturity. Quantitative research that involved a cross-sectional and longitudinal research design was implemented. Career choice and self-esteem were the strongest predictors of career maturity. Self-efficacy showed marginal significance and possible selves explained only 2% of the variance of the dependent variable career maturity.

### **Key words**

Career maturity; career choice; subject choice, perceived academic achievement; self-efficacy; self-esteem; possible selves

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# **CHAPTER 1**

## **INTRODUCTION AND OVERVIEW**

### **1.1 INTRODUCTION**

A recent study conducted by the Council on Higher Education (2013:15) indicates an increase in enrolment for schooling and higher education since 1994. However, the very same study indicates that the graduate output has not kept pace with South Africa's needs. The Council on Higher Education proposes that there is a critical need for more graduates in order to improve social, economic and educational development.

Since 1994 educational changes in South Africa have attempted to "provide a system of education that builds democracy, human dignity, equality and social justice" (South Africa 2001:4) and there was a deliberate attempt to broaden participation in higher education in order to minimize race and class stratification. This paradigm shift required that high schools and colleges need to prepare all learners for life, work and tertiary education, rather than only the selected and academically talented students. Despite the vision and efforts of the Department of Basic Education, the recent report of the Council on Higher Education (2013) demonstrated major shortcomings in terms of numbers, equity and the proportion of the student body that actually do successfully complete tertiary studies. For instance, it was found that only about 27% of all students in contact institutions graduate in regulation time (e.g., three year or four year courses), and that only 35% of the total intake and 48% of contact students successfully graduate within the period of 5 years. It was also found that 55% of all students who take longer than 5 years to graduate or return to the system after dropping out, will never graduate. The graduation of white students remains at 50% higher than the rates of African students. The net results of the disparities are that only 5% of African and Coloured youth are succeeding in any form of higher education. The Council on

Higher Education (2013:15) and Fraser and Killen (2002:1) concluded that a skewed profile of access, success and completion based on race still exists within the South African higher educational system.

Individual's social, cultural and economic backgrounds result in a diversity of life experiences and when these different backgrounds are combined with a diversity of motivation, abilities and personal characteristics, it results in unequal levels of readiness for tertiary studies and careers (Fraser & Killen 2002:1). Hart (2013 in Gernetzky et al 2013:1) warns that the senior certificate pass rate alone is not a strong indication that matriculants are adequately prepared for existing basic education. The same might be assumed for matriculants' career choices.

At present young people are becoming more aware of the world of work as they see their parents, friends and/or siblings struggle to find employment or experience work stress. The fast changing world of work provides great challenges for both career educators and psychologists (Du Toit 2010:1) especially, as mentioned above, because career education in the present South Africa still reflects inequalities resulting from apartheid.

Adolescence is a time of active vocational development and making career choices are among the most important tasks to be mastered (Creed et al 2007:379). Super's Self-Concept Theory (1957) states that an individual needs to reach a certain state of readiness in terms of self-concept development in order to make an appropriate career choice and this "readiness" is referred to as *career maturity*.

There are many problems experienced by South African youth in making effective, informed career decisions and therefore it would be of value to explore the relationship between personal and contextual factors and career maturity. Contextual factors include socio-economic status, home and family environment, rural and urban background and

cultural customs. Biological and psychological factors include age, gender, school grade, intelligence, personality, motivation, interest, aptitude, self-concept, self-esteem, self-efficacy, perceived and actual academic achievement to name but a few. Past as well as recent research has shown that age (Langley 1988; Miller 2006:23), school grades (Crites 1969), self-efficacy (De Bruin & Bernard-Phera 2002:1; De Raaf et al 2009:3), self-esteem and self-concept (Crites 1969), perceived and actual academic achievement (Coetzee 2011:41), subject choice (Packard & Nguyen 2003:251) and possible career choice (Crites 1973 in Miller 2006:19; Langley 1988:8; Langley et al 1996:4; Patton & Lokan 2001:31) predict or positively relate to the level of career maturity. These factors in relation to career maturity have been researched numerously on international as well as local level. According to Allison and Cosette (2007:1) the study of female career development, as part of vocational psychology research, should be utilized in order to improve the career assessment of females.

Understanding how girls choose careers may require the investigation of the basic career development paradigms, e.g., the theoretical frameworks of Super (1957), Crites (1976) and Langley (1988) and it is then necessary to extract and view the relevant and applicable approaches with new perspective (Allison & Cosette 2007:1). The career development of adolescent girls is very complex and Arnold (1995 in Packard & Nguyen 2003:251) contends that many girls who are, for example, initially interested in prestigious careers amend their career plans to pursue something more mediocre or may drop out of an academic programme completely (Council on Higher Education 2013:15). This trend is reflected many times in the lack of ethnic, socioeconomic and gender diversity especially in the tertiary academic fields of science, mathematical sciences, engineering, and computer science (Packard & Nguyen 2003:251). Family and cultural influences or the lack of mastering the appropriate developmental tasks (Super 1957) may attribute to this shortcoming.

An area that hasn't been researched yet is career maturity in relation to the construct possible selves (Markus & Nurius 1986). Although Super's (1957) career development theory is primarily based on the self-concept (a significant factor that predicts career maturity), the author never elaborated on the different dimensions of the self-concept (Sanchez & Roda 2003:97) like the academic self-concept or (later) the possible selves (Markus & Nurius 1986). The theory of possible selves is primarily to complement conceptions of self-knowledge and represent individuals' ideas of what they might become, what they would like to become, and what they are afraid of becoming (Markus & Nurius 1986:954). If individuals can visualize themselves as achievers like e.g., excelling academically in school or becoming a successful lawyer (see section 4.4.6), it may be hypothesized that a higher level of career maturity may be present. The inclusion of the theory of possible selves in the current research aims to increase our understanding of career development and career maturity in general, and of girls, in particular.

## **1.2 PROBLEM STATEMENT AND RESEARCH QUESTIONS**

### **1.2.1 Awareness of the problem**

The researcher's motivation to undertake this study was prompted by her exposure to the girls at the school where she is employed as the career guidance counsellor. It appears that some girls are 100% certain about what they want to study and later accomplish in their lives, whereas others are confused and uncertain about what they want to do after Grade 12. The dichotomous outcome of learners' career choices sparked an interest with regard to the possible factors that may influence career maturity, in other words, an interest in investigating the factors that could possibly predict career maturity.

### **1.2.2 The statement of the research problem**

The first problem that will be investigated in the current research relates to the various factors that predict the career maturity of school-going girls. The focus will be on the contextual factors namely subject choice and career choice and the biological and psychological factors namely grade, perceived and actual academic achievement, self-efficacy, self-esteem and possible selves that may or may not predict the career maturity of school-going girls.

The second problem that will be investigated is the lack of research that exists based on the relationship between the different dimensions of the self-concept and career maturity. This is specifically one of the shortcomings of Super's (1957) (see section 2.3.1) career developmental theory in that the author never elaborated on the different dimensions of the self-concept and their relationships to career maturity. To date no evidence of research on the relationship between the self-concept dimension, possible selves, (Markus & Nurius 1986) and career maturity was found by the researcher. Part of the focus will therefore be on the factor possible selves as predicting factor of career maturity.

The third problem that will be investigated is the stability of the construct career maturity in the absence of an intervention programme. According to the career developmental theories as espoused by Super (1957) and Crites (1969) (see chapter 2), it can be assumed that the level of career maturity will increase as learners progress from one grade to the next. The current study will explore whether career maturity remains stable over a period of six months as learners progress from one grade to the next without any intervention or additional career guidance that may attempt to increase their career maturity.

### **1.2.3 Research questions**

The current study will therefore attempt to address the following research questions:

- What are the factors that predict the career maturity of school-going girls?
- Does the factor, possible selves, significantly predict the career maturity of school-going girls?
- Does career maturity remain stable as school-going girls' progress from one grade to the next in the absence of a career guidance intervention programme?

### **1.3 AIM OF THE STUDY**

The first aim of the present study is to determine the various factors that influence school-going girls' "readiness" to make appropriate career choices. In other words, the relationship between various predicting factors and the level of career maturity will be investigated. The present study will specifically explore how the contextual factors, subject choice and career choice, and the biological and psychological factors namely grade, perceived and actual academic achievement, self-efficacy, self-esteem and possible selves relate to the level of career maturity.

To date there is little knowledge of how career maturity is influenced by possible selves (Markus & Nurius 1986) and this area of research may significantly contribute to the field of education in general and career psychology in particular. Consequently, the second aim of the present study is to investigate the relationship between possible selves and career maturity.

If it is known which factors predict career maturity in school-going girls, the lack thereof may be addressed in order to prepare them to make appropriate career choices and have successful academic and vocational futures. Both aim 1 and 2 were addressed by conducting a cross-sectional survey.

Lastly, the study aims to measure the sensitivity of career maturity with regard to the progression of an individual from one grade to the next in the absence of an intervention programme. It may be assumed that if no change to the latent development of the construct career maturity takes place, career maturity as construct is stable. A longitudinal study was conducted to address this aim.

#### **1.4 THE OBJECTIVES OF THE CURRENT RESEARCH**

In order to address the above outlined research problems and research questions the following research objectives were defined:

- Conducting a comprehensive literature review on career development theories (Super 1957; Crites 1969; Langley 1988) that include the construct career maturity
- Broadly defining the term, career maturity, within the theoretical frameworks of Super (1957), Crites (1969) and Langley (1988)
- Conducting a comprehensive literature review on the relation between career maturity and the various factors that predict career maturity
- Conducting a specialized literature review on the self-concept dimension called possible selves (Markus & Nurius 1986)
- Conducting a cross-sectional study determining what factors (including possible selves) predict career maturity in school-going girls
- Documenting the results of the cross-sectional study
- Conducting a longitudinal study investigating the stability of career maturity over a period of time without the introduction of an intervention programme
- Documenting the results of the longitudinal study
- Finally to conclude the findings of the current research

## **1.5 RESEARCH METHODS**

Quantitative research methods were used in the present study. A combination of a longitudinal and a cross-sectional survey design was applied. The independent variables were subject choice, career choice, grade, self-efficacy, self-esteem, perceived and actual academic achievement and possible selves. The dependent variable was career maturity. Chapter 4 will provide an in-depth discussion on the empirical details of this research study.

## **1.6 POPULATION AND SAMPLING**

Female learners from grade 10, 11 and 12 of Loreto Convent School were included in the present study. In total 142 participants took part in the present study. Participants were on average 16.62 years old, ranging from 15 to 18 years. Convenience sampling was used because the researcher is employed at the school and has easy access to the learners. The learners at Loreto Convent School were notified in writing about the type of research and that their participation was voluntary. Consent was obtained from the parents as well as the school principal.

## **1.7 DIVISION OF CHAPTERS**

The present dissertation is divided into six chapters. Chapter 1 serves as an introductory orientation to the present dissertation. Chapter 2 and 3 provide the literature review of the dominant theories and empirical findings from which the hypotheses were derived. Chapter 4 outlines the research methodology. In chapter 5 the findings are reported with regard to the proposed hypotheses and the results are discussed. Chapter 6 provides the conclusion and recommendations, as well as the limitations of the present research.



## **1.8 CLARIFICATION OF TERMINOLOGY**

The following key concepts will be used throughout the study:

- Career
- Career development
- Career maturity
- Developmental tasks
- Decision-making
- Academic self-concept
- Self-efficacy
- Self-esteem
- Self-concept
- Possible selves

### **1.8.1 Career**

An individual may have more than one career in his/her lifetime and career can thus be defined as any sequence of experiences that deals with careers (Du Toit 2010:3). Super (1977 in Coertse & Schepers 2004:56) asserts that career involves an individual's total lifespan.

### **1.8.2 Career Development**

According to Dhillon and Kaur (2005:71) career development refers to the lifelong process of developing work, values and a vocational identity, exploring different career opportunities and working part-time. Career development, vocational development and occupational development are used interchangeably in the text.

### **1.8.3 Career Maturity**

Career maturity is the extent to which an individual is able to master those career developmental tasks that are applicable to the relevant stage of his/her life (Miles 2008:8). Career maturity is important during late adolescence when young adults have to make their initial career choices (De Raaf et al 2009:3) and refers to an individual's readiness to make an appropriate career choice (Super 1957).

### **1.8.4 Developmental tasks**

Developmental tasks dominate certain stages of life, such as childhood, adolescence and early adulthood and these have to be mastered by the individual to progress successfully to the next life stage (Super 1957). Super (1957:85) explains that from age 15 to 25, individuals learn to master certain developmental tasks like career exploration and career decision-making.

### **1.8.5 Decision-making**

The Pocket Oxford English Dictionary (2005, sv 'decision-making') explains decision-making as a choice or judgement after considering something. According to Super (1957) decision-making can be perceived as the cognitive aspect of career maturity. The primary goal of decision-making is to ensure that an individual has the ability to apply knowledge and insight into his or her vocational decision making.

### **1.8.6 Self-efficacy**

Self-efficacy is the perceived judgments of one's ability to successfully complete a specific task (Bandura 1977 in Witchger 2011:44). An individual who perceives him/herself as being able to master an anticipated task has a better chance of actually mastering the task

efficiently, than his/her counterpart who has a negative perception about the successful execution of the same task.

### **1.8.7 Self-esteem**

Self-esteem is an emotive evaluation of an individual by the individual self and can therefore be classified as an affective structure. If people evaluate themselves positively, they have high self-esteem, and if people evaluate themselves negatively, they have low self-esteem (Woolfolk 2007:105).

### **1.8.8 Self-concept**

Self-concept can be defined as an individual's personal assessment of what he/she thinks of him/herself (Nasir & Lin 2013:193). An individual with a positive self-concept has a positive personal view of him/herself whereas an individual with a negative self-concept has a negative personal view of him/herself.

### **1.8.9 Possible selves**

Possible selves represent individuals' ideas of what they might become, what they would like to become, and what they are afraid of becoming in the future (Markus & Nurius 1986:954). Possible selves can be divided into the positive possible selves and the feared possible selves. Both the positive possible selves and feared possible selves are divided into six different categories namely *achievement*, *interpersonal relationships*, *personality traits*, *physical/health related*, *material/lifestyles* and *negative/risky behaviour* (Oyserman (2004:4-7).

### **1.8.10 Academic Self-concept**

According to Byrne (in McCoach & Siegle 2003:61) academic self-concept involves a description and an evaluation of one's perceived academic abilities. In the present research academic self-concept will be referred to as perceived academic achievement and is what each learner thinks her results are for the different subjects that she is enrolled for at school.

### **1.8.11 Academic Achievement**

Howcroft (1991:111) describes academic achievement as the actual score that an individual obtained in an examination or a test. In the present study academic achievement will be referred to as actual academic achievement.

## **1.9 SUMMARY**

Chapter 1 served as an introduction and orientation to the present research. The research problems and aims of the current research were elaborated upon. The important concepts relevant for this research were defined and the research methodology was briefly outlined. Chapter 2 will provide an outlay of the theoretical frameworks underlying the present study.

## **CHAPTER 2**

### **THE THEORETICAL FRAMEWORK of CAREER MATURITY**

#### **2.1 INTRODUCTION**

Chapter 2 outlines the three dominant and interrelated theories of career maturity. The first theory that will be deliberated upon is the Self-Concept Theory proposed by Super (1957) who conceptualized career maturity from a human life span perspective with various distinct stages. The second theory that will be considered is John Crites' Model of Career Maturity (1969). Crites, a student and colleague of Super, was interested in the measurement and explanation of the concept of career maturity. Crites' theory was primarily built on Super's theory and one of his most important contributions namely the Career Maturity Inventory, has often been used by psychologists and researchers (Coertse & Schepers 2004:56). Lastly, Langley's theory of career maturity as an integration of Super and Crites' approaches by considering the South African context (1988) will be discussed. Langley's theory forms the most important framework for the present research as she emphasised that the individual's context and life history should be taken into consideration when working with career choices. She also highlighted various factors like age and gender that might influence and predict career maturity in the very unique South African context. One of her main contributions was the development of the Career Development Questionnaire adapted to the South African context that was used in the present study and which will be discussed in chapter 4.

However, various concepts, that include, career, career development and vocational development will firstly be defined in order to gain a profound understanding of what career maturity is.

## **2.2. CAREER AND CAREER DEVELOPMENT**

It is imperative that the concepts career, career development and vocational development, that form part of career maturity, be understood before the concept of career maturity is addressed. Coertse and Schepers (2004:56) stated that the question: “What is meant by a career?” should not be ignored when dealing with the definition of career maturity. According to the authors, Super (1971) asserted that a career would involve an individual’s total lifespan and is represented as a changing process rather than a static state and that the individual is required to become the driving force who constantly constructs links between the self and his/her world of work. Schein (1977 in Coetzee & Roythorne-Jacobs 2007:192), stated that “career” should be perceived as a planned route that an individual follows over a period of time and space. Career involves the occupation of a specific role. Crites (1981:11) described “career” as something that is contemporary and stated that it includes the developmental nature of decision-making as a lifelong process.

Dhillon and Kaur (2005:71) drew attention to the fact that the concepts career development, vocational development and occupational development are used interchangeably. It is referred to as the lifelong process of developing work, values, establishing a vocational identity, seeking more vocational opportunities and engaging in part-time work. Coetzee and Roythorne-Jacobs (2007:192) explained career development as an “... on-going process by which an individual progresses through a series of stages, each of which is characterised by a relatively unique set of issues, themes or tasks”.

Career maturity can be understood as a crucial part of career, vocational and/or occupational development. Career maturity conceptualises the readiness of an individual to make an informed choice for a particular career.

## **2.3. CAREER MATURITY – Theoretical approaches**

### **2.3.1 Theory of Super**

Super's dictum: "until you know who you are, you won't know what you can become" implied that there is state of readiness that an individual is required to attain in terms of self-concept development (Akhurst & Mkhize 2006:56). Career maturity was first known as "vocational maturity" and has since been researched numerously as part of career development (Bozgeyyikli et al 2009:1; Louw et al 2005:443). Super (1977:295 in Coertse & Schepers 2004:56), defined career maturity as "the course of events which constitutes a life; the sequence of occupations and other life roles which combine to express one's commitment to work in his or her total pattern of self-development". Therefore, career maturity refers to an individual's readiness to make informed, age-appropriate career decisions when dealing with certain career development tasks (Coertse & Schepers 2004:56; Louw et al 2005:443; Mubiana 2010:35). According to Bernard-Phera (2000:15), career maturity is an individual's need to reach a specific form of readiness in relation to the development of the self-concept.

Super shifted his focus of career counselling away from the static, single-choice as a time concept of decision-making. He also considered the contributions of sociology and economics in career counselling as valuable. Super placed the study and field of career behaviour within the human development context (Crites 1981:7). According to Allison and Cosette (2007:9), it is challenging to summarize Super's complete work in a chronological manner, since many changes in his theory manifested throughout his lifetime. Super's (1990) study of career choice began with trait and factor approaches, but was later developed into a developmental approach that recognized repetitions of career decisions (Allison & Cosette 2007:5; Crites 1981:10). Super's life-span– and life-space theory evolved over more than forty years.

In 1980, Super developed the Life Career Rainbow model as a scheme that is meant to assist in exploring and studying career development. Super's model was not intended to be an integrated, comprehensive theory, but rather a segmented theory (Leung 2008:8). Super (1957) suggested that career choice and development is a process of developing and implementing a person's self-concept. The concept of the self was initially inspired by Carl Rogers (Leung 2008:120) who defined self-concept as the differentiated section of the phenomenal field that concerns the person with him or herself as "...the organized consistent conceptual gestalt composed of perceptions of the characteristics of the "I" or "me" and the perceptions of the relationships of the "I" or "me" to others and to various aspects of life, together with the values attached to these perceptions. It is a gestalt which is available to awareness though not necessarily in awareness. It is a fluid and changing gestalt, a process, but at any given moment it is a specific entity" (Rogers 1959 in Meyer et al 2003:466). The self-concept can change and flex and Rogers contended that self-perceptions are arranged into a whole and that change in one section of the self-concept will impact the whole self-image (Meyer et al 2003:466).

Super's model advocated the idea that an individual's self-concept influences his/ her occupational choice. The vocational self-concept is only a component of the total self-concept. The vocational self-concept is the driving force behind the career pattern that an individual will follow throughout his or her life. According to Miller (2006:15) the vocational self-concept of adolescents and young adults develop by observing others in the workplace, through the environment of adolescents and through their personal experiences. Self-concept is an end product of complex interactions among various factors, such as, cognitive and physical growth, personal experiences, and environmental characteristics and influences (Super 1990 in Leung 2008:120). A stable self-concept should establish itself in late adolescence in order to support the adolescent in a career choice. The self-concept is



dynamic and continuously develops as the individual has new experiences and progresses through different developmental stages (Zunker 1993:60). It develops as a result of experience and can therefore be considered to be a life-long developmental process (Super 1957 in Ziebell 2010:22-23).

According to Miles (2008:8), Super maintained that time and life experiences influence vocational preferences and skills, together with an individual's life situation. Vocational maturity may or may not correspond with chronological age. Super's view is that individuals move through each of these life stages as they go through vocational changes. Consequently, the concept of "career" is an on-going process that includes decision making, education, change and adaption. Vocational choice should be seen as an expanding process and not as a 'point-in-time event' (Super et al 1996:122) and career maturity is therefore conceptualised as developmental stages.

Super (1957:71-85) identified five different life stages based on the work of Buehler (1933). These life stages constitute Super's Developmental Theory (see figure 1). Life stages at any moment are an accumulation of roles that any specific individual is assuming. Different life roles might become highlighted as the individual progresses through the life stages. At each moment, two or three roles might take a more central position, while other roles remain less important (Super 1957:72). Role conflicts, role interferences, and role confusions will take place when individuals are limited in their ability to deal with the demands associated with their multiple roles (Louw et al 2005:443; Super et al 1996 in Hargreaves 2006:24). Life-roles and life-space highlighted the contextual facets of Super's theory.

The five life stages according to Super's theory (1957) are:

- 1) The **Growth Stage** extends from birth to the age of fourteen. During this stage the individual encounters four very important developmental tasks, which include: becoming aware of the future, increasing personal control over an individual's own life, convincing oneself to succeed at school and work, and acquiring competent work attitudes and work values.
- 2) The **Exploratory Stage** includes the period from 15 years to 25 years. This stage includes the adolescent years, which is most relevant for this research. Super (1957:84) explained that: "...adolescent exploration is not so much a process of developing a new picture of one's self as of putting it into words and thus developing a basis for finding out what sort of outlets there are in society for a person who seeks to assume a given kind of role, and then of making modifications in the self-concept to bring it into line with reality". Adolescent exploration may be understood as a process of ascertaining and testing reality (Super 1957:85).
- 3) The **Establishment Stage** includes the years from 25 to about 45 years. It involves the more mature adult in stabilising, consolidating and progressing in his or her career position of choice.
- 4) The **Maintenance Stage** ends at about 65 years of age. The major career development tasks are those of holding on, keeping up and many times innovating.
- 5) The **Stage of Decline or Disengagement** is the final stage and starts at about 65 years of age. The individual is required to decrease work activities with the emphasis on planning for retirement.

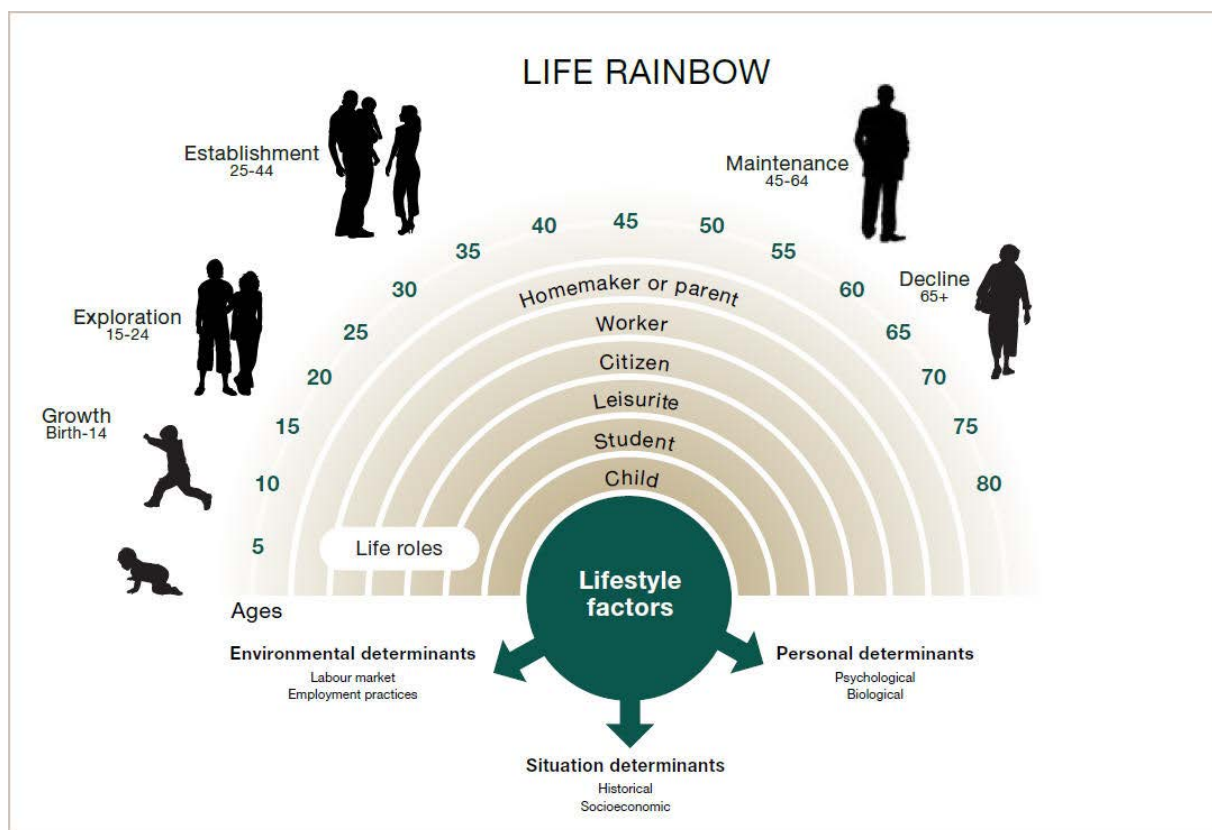


Figure 1. Life-Space Life-Roles model of Super (Careers New Zealand 2012)

According to Super (1980), developmental stages are accompanied by vocational developmental tasks. He stated that the concept of life stages can be utilized to highlight the fact that developmental tasks tend to dominate at certain ages such as those of childhood, adolescence and early adulthood.

The first developmental task is classified as **Crystallization**. This task takes place between the ages of 14 to 18 years. The planning and further development of a tentative occupational goal is prominent during this developmental task. The second developmental task is **Specification** and it takes place between the ages of 18 to 21 years of age. This task involves establishing the vocational goal. The third task, **Implementation**, takes place at approximately 21 to 24 years of age. Training for and being employed is central to this task. The fourth developmental task is **Stabilization** that takes place between the ages of 24 to 35

years of age. During this task the individual will be working and establishing his or her career choice. The fifth developmental task is **Consolidation** which becomes prominent at around 35 years of age and is manifested when a person progresses in his or her particular career (Spies 1996:21-25; Watson & Stead 2006:52-55).

Based on the rationale that developmental stages are accompanied by vocational developmental tasks, Super's theory proposes five dimensions to determine an individual's career maturity or readiness to make responsible and informed career choices. These dimensions include: planfulness; exploration; information; decision-making; and reality orientation (Allison & Cosette 2007:6-7; Botha 1994:84; Miles 2008:13-15)

The first dimension is **planfulness**. This dimension refers to the individual's awareness that it is important to make educational and vocational choices at a particular point in time. The individual will be required to reflect upon his or her past life experiences as well as any personal hope he or she may have about the future. Planfulness deals with how an individual applies his or her abilities, values, and interests through social roles (Miles 2008:13). Super stated that planful attitudes can be learned. Planfulness, planful attitudes and future orientation have been the basic elements in Super's model and are central components in vocational choice readiness. The second dimension, **exploration**, involves questioning. Different resources are used to encourage the active participation of the individual self. During exploration individuals concentrate on inquiring about themselves within their situation. Various aspects are evaluated such as the relations with educational facilities, school, friends, family or colleagues at work; attitude towards available resources and being prepared to utilize them. The third dimension is **information**. This dimension incorporates the collection and processing of information in relation to the world of work, to individual's preferred vocational group and other life-career roles. Individuals are required to reassess their abilities, interests and values in an ever changing vocational environment. The fourth

dimension is **decision-making** and is viewed as the cognitive aspect of career maturity. The goal of decision-making is to ensure that an individual has the ability to apply knowledge and insight into his or her vocational planning and decision making. The fifth dimension is **reality orientation**. This dimension includes the following aspects: self-knowledge, realism in self and situational assessment, consistency of the vocational role, references, crystallisation of self-concepts and vocational goals, interests, objectives, and occupational experience. Table 1 provides an overview of these dimensions.

Table 1. Super's (1983) five dimensions of career maturity (cited from Miles 2008:15; Careers New Zealand 2012)

<b>I Planfulness:</b>	Autonomy → Control of career provides with power to plan
	Time perspective → Reflection on past experiences and anticipating the future
	Self-esteem → Determines the individual's worth and the control he or she will have over future goals
<b>II Exploration:</b> - inquiring about oneself and situation - querying various life-career roles pursued - explores attitude towards resources and willingness to utilise them	

<b>III Information:</b>	<div>World of work</div> <div>→ person's need to acquire information about the world of work</div> <div>→ coping behaviours</div> <div>→ economic trends and change</div> <div>→ access and means of entry</div> <div>Preferred Vocational Group</div> <div>→ education and training</div> <div>→ entry requirements</div> <div>→ duties, methods, materials and tools</div> <div>→ advancement, transfer</div> <div>→ working conditions and rewards</div> <div>→ lifestyle</div> <div>→ future prospects</div> <div>Vocational and other life-career roles</div> <div>→ relative importance of work</div> <div>→ role relationships</div> <div>→ role for self- realisation</div>
<b>IV. Decision-making:</b>	<div>– personality traits essential for career development</div> <div>– requires knowledge and commitment to implement principles of decision-making</div>
<b>V. Reality Orientation:</b>	<div>– self-knowledge</div> <div>– realism in self and situational assessment</div> <div>– consistency of career role preferences</div> <div>– stabilisation in central life roles</div>

It is the opinion of the researcher that although the construct career maturity itself (as proposed by Super 1957) has matured to a point where the name may be changed to better understand it, the comprehensive principles proposed by Super as the founder of career maturity will always stay central to any reformulation offered.

### 2.3.2 John Crites' theory on career maturity

Super's developmental approach was further developed by Crites (1976) who introduced the time dimension into career counselling (Crites 1981:118; Reid-Van Niekerk &

Van Niekerk 1990:1). Crites (1976, 1978 in De Raaf et al 2009:3), hypothesized that career decisions takes place in five career choice processes namely;

- (a) accurate self-appraisal
- (b) gathering occupational information
- (c) goal selection
- (d) making plans for the future and
- (e) problem solving.

Career maturity was defined by Crites as two independent constructs. First, the degree of vocational development referring to the maturity of career behaviour the individual has achieved in relation to his/her own life stage. Secondly, the development of the individual's career behaviour in comparison to the career behaviour of his/her peers (Miller 2006:18).

Super (1957) and Crites (1976) both argued that a career mature person will (1) gather information about the self in order to gain occupational insight; (2) acquire the necessary skills in order to make an informed career decision; (3) integrate self-knowledge and occupational knowledge and (4) implement the abovementioned knowledge when planning for a career. Individuals who are career mature would have completed more of the career development tasks successfully in comparison to individuals who are less career mature (Coertse & Schepers 2004:56).

The career maturity model as proposed by Crites consists of a cognitive and an affective dimension. The cognitive dimension consists of decision-making skills whereas the affective dimension includes the individual's attitudes towards his/her career decision-making process (Patton & Creed 2001:1; Patton et al 2003:33; Themba 2010:28). Career maturity can then be seen as an individuals' readiness to make appropriate career decisions, based on their

attitudes towards career decision-making as well as their knowledge pertaining to career decision-making (Bozgeyileki et al 2009:1). Crites' hierarchical model explains which factors and variables may affect an individual's level of career development. It includes the following: consistency of career choice, career choice content, realism of career choice, career choice competencies, career choice process, and career choice attitudes (Salami 2008:38)

According to Crites (1989 in Themba 2010:29-30), consistency of career choices, refers to the consistency reflected by young individuals when faced with various career choices. For example, a consistent choice is expected to be more in line within a specific field (e.g., mathematics) and level (professional level). This dimension of Crites's model consisted of the time, field, level and family variables; however in the revised model the family variable was dropped (Westbrook 1983 in Themba 2010:29). Realism of career choices refers to the integration that exists between an individual's aptitudes, interests and personality and those required by his or her chosen career. Realism of career choices is also related to work success and satisfaction once the individual has commenced with his or her specific career (Miller 2006:18). Career choice competency is the cognitive dimension of Crites's model of career maturity. It consists of the following components of cognition within the process of career decision-making (Crites1973 in Miller 2006:19):

- **Self-appraisal** (knowing oneself) refers to an individual's psychological capacity to accurately evaluate and estimate what his or her career strongpoints are.
- **Occupational information** (knowledge about work) refers to an individual's knowledge as to how workers are occupied in their work (what they do).
- **Goal selection** (choosing a career or job) refers to an individual's ability to match him or herself with the occupation that suits him/her best



- **Planning** (looking ahead) refers to an individual's ability to plan and organize a series of actions in a specific sequence. The individual is introduced to a career and progresses gradually into this career
- **Problem-solving** (what the individual should do) refers to the individual's ability to make comparisons and to choose the best possible solution from the alternatives at hand. A process of decision-making is needed in order to do this successfully

Career choice attitudes refer to the affective dimension of Crites's model of career maturity. It evaluates the individual's feelings and subjective reactions towards career choice when initially entering the world of work. According to Crites (in Ziebell 2010:24) individuals' career choice attitudes will influence their ability when they eventually have to choose a career. The attitudes that form part of the career decision-making process include the following:

- **Involvement in the choice process:** refers to the extent to which an individual actively participates in making a career choice
- **Orientation towards work:** refers to whether an individual is task- or pleasure-orientated with regards to work as well as the values related to this
- **Independence in decision-making:** refers to the extent to which an individual can make a career choice without the influence of others
- **Preference for choice factors:** refers to whether an individual bases his or her choice upon a particular factor. In the revised model of career maturity, this variable was replaced by "decisiveness" that refers to the extent to which an individual displays confidence in his or her career choice.
- **Conceptions of the choice process:** refers to whether an individual has accurate or inaccurate conceptions about making an occupational choice. In the revised model of career maturity, this variable was replaced by "compromise". This refers to the extent

to which an individual is willing to compromise between vocational hopes and reality (Westbrook 1983 in Themba 2010:30-31).

The researcher is of the opinion that Crites' theory is more pragmatic and condensed than Super's very comprehensive theory. Crites's theory is relevant to the present research, as the development of the Career Development Inventory and later the Career Development Inventory-Revised, contributed to the development of the Career Development Questionnaire (Langley 1988; Langley et al 1996) which was applied in the present study. Crites' principal contributions include the emphasis on time in the development of career maturity of the individual as well as the development of the measurement tools used to assess career maturity, both aspects that were relevant in the current research.

### **2.3.3 The theory of Langley**

Langley (1988) used the work of Super and Crites as the foundation for her comprehensive theoretical career maturity model (Themba 2010:31) which forms the backbone of the present study. Langley's approach is eclectic in nature but her model is comprehensive. She has taken the context of the individual into consideration. According to Miles (2008:4), Langley stated that it is imperative that research in career development takes place bearing the African context in mind, which makes her theory most applicable for the present study.

Langley has focused greatly on the role of the counsellor in career development, as well as the instruments that enhance the counselling process. She proposed that an individual is required to master eleven universal career development tasks in various life stages in order to make appropriate vocational decisions (Langley 1988:8). The eleven tasks she identified are: needs; life roles; values; career interests; career maturity; decision-making; career information; integration of self-knowledge and career knowledge; career choice; career

planning; and a group of relevant factors, for example, intelligence, personality, self-concept and study habits (Langley et al 1996:4). Moreover Langley (1988) proposed that planning a future career is influenced by a range of factors such as self-esteem, educators and parents, gender, career maturity, academics, socio-economic status, relationship between socio-economic status and career maturity, personality, decision-making style and culture.

Langley et al (1996:3) proposed five common dimensions that the theorists Super (1984), Crites (1978) and Westbrook (1975, 1983) share. These dimensions can be seen as being essential stages of development that lead to career maturity.

These dimensions are:

- Obtaining information from the individual regarding him or herself and converting this information into self-knowledge.
- Acquiring decision-making skills and applying it in order to make effective decisions.
- Acquiring decision-making skills and applying it in order to make effective decisions.
- Integration of self-knowledge and knowledge of the world of work.
- Implementing vocational knowledge when planning for a career.

Langley accentuated the following factors relating to career maturity:

- An increase in age correlates with an increase of career maturity.
- The higher the grade at school, the higher the level of career maturity when making career choices.
- Socio-economic status and culture will both influence career maturity.
- The more intelligent the individual, the more mature he or she will be when making his or her career choice (Langley et al 1996:3).

Langley viewed career maturity as the individual's ability to master the appropriate developmental tasks in a given life phase (see table 2). Career maturity can be expressed in

two ways: firstly, either tasks that can be mastered theoretically in a specific life phase or secondly, tasks that an average person can master in a particular life phase (Langley 1989 in Botha 1994:96). The integrated process approach implicates that as the counselling process develops, certain career developmental tasks should be completed (Langley 1989 in Sibilanga 2002:18). An increase in career maturity takes place when an individual is able to master career development tasks, as indicated on the right hand side of Table 2. Every step of career maturity that is indicated on the left-hand side of Table 2, indicates the mastering of one or more appropriate career developmental tasks, for example “the increase in self-knowledge” in career maturity, implies that needs, life roles, values and interests were identified as well as other related factors that are psycho-social in nature (Langley 1989 in Botha 1994:98).

Table 2. The relationship between career maturity and career development tasks according to the integrated process approach

<b>Components (dimensions) of career maturity</b>	<b>Tasks in the integrated process approach</b>
Self-knowledge	Needs Life roles Work values Career interest Other relevant factors
Decision-making	Decision-making Career choice
Career information	Career information
Integration of self-knowledge with career knowledge	Integration of self-knowledge with career knowledge
Career planning	Career planning

According to De Bruin (1999 in Miles 2008:26), Langley’s model of career development emphasizes important aspects in the career choice process such as the various

developmental tasks that need to be mastered in the continuous life stages in order for the individual to become career mature.

Langley's approach has been consolidated into a career maturity instrument, namely the Career Development Questionnaire, which has been widely used in South Africa. Langley who worked with Super and his international research team translated theories and instruments so that they could be utilized in the diverse South African cultural context (Miles 2008:22). Langley's valuable research on the construct of career maturity and the development of her theory has enabled psychologists and researchers to use a career maturity measuring tool that are culture and gender sensitive. Her work has thus contributed, and will continue to contribute, to the bigger understanding of the construct career maturity locally and internationally.

## **2.4 SUMMARY**

In Chapter 2 the concept of career maturity was dealt with in detail and the theories of Super (1957), Crites (1969) and Langley (1988) were discussed respectively. The concept of career maturity has been tested in various national and international studies. Particular focus of these studies was on the factors that predict and influence career maturity. Chapter 3 will provide an overview.

## **CHAPTER 3**

### **LITERATURE REVIEW**

#### **3.1 INTRODUCTION**

Various studies have indicated that contextual, biological and psychological factors influence career maturity (Langley 1988:12). Chapter 3 summarizes existing research on the various factors. Particular focus will be given to the following contextual factors: culture, socio-economic status, family, subject choice and career choice. The biological and psychological factors that will be deliberated upon are age, gender, grade, intelligence, perceived and actual academic achievement, self-efficacy, self-esteem and possible selves.

Career maturity cannot be investigated and understood as an isolated construct, but it forms part of the bigger concept of career development. Instead, career maturity itself consists of different dimensions as put forward by Super and Crites (see chapter 2). It is therefore important to take note that some of the research mentioned in the following section describes factors that relate to career maturity as part of career development and at other times only certain dimensions of career maturity and not the whole construct as such.

#### **3.2 CONTEXTUAL FACTORS**

The contextual factors culture, socio-economic status, family, subject choice and career choice will be discussed. Subject choice and career choice were included as contextual factors because it is within the South African school system that an individual is required to make subject choices before they actually make career choices. This relates to Langley's theory that emphasizes the consideration of context as discussed in chapter 2.

### 3.2.1 Culture

Research conducted by Lee (2001) shows that career maturity is influenced by cultural factors. Korean societies emphasize the duty and opinions of the family or group more than the individual when it comes to occupational choice. Leong (1991 in Lee 2001:53) contends that if important career decisions are made by an individual's family, that individual may lack career maturity, especially when it comes to independence, decisiveness and confidence. In a cultural comparison by Lee (2001:54) it was found that Korean students value monetary importance far more than American students who were interested in the career status and work environment.

In South Africa the value "Ubuntu" in black cultures is associated with collectivism that is in contrast to western societies who value individual achievement, satisfaction and actualization (Du Toit & De Bruin 2002:74). A greater awareness of the role of culture and community in the development of career maturity in adolescents could be of great value and Watson and Stead (2006:28) call for greater recognition of human diversity, individual self-determination and acknowledgement of marginalised groups. They stress that: "... the strong emphasis placed on the community in South African black cultures, for instance, calls for a redefinition of theoretical constructs such a career maturity and role salience, both of which emphasize individualism. Such constructs are only meaningful if they are understood within the greater contexts within which individuals live and work" (Watson & Stead 2006:28). This statement supports Langley's (1988) view that the individual's life history and context should be taken into account when dealing with career development, especially in South Africa. There is not much evidence that Super and Crites discussed culture as a predicting factor of career maturity and this in itself is one of the biggest shortcomings of their theories. The concept of career maturity was basically developed by Super based on white middle class men in America and differences in cultural contexts were not considered.

### **3.2.2 Socio-economic status**

In the light of the very high unemployment rate in South Africa, many South Africans have to ignore their vocational aspirations and be content with what they can find in order to survive. This plays an especially important role in young black South Africans and their perceptions of careers in the world of work. According to Du Toit and De Bruin (2002:74), socio-economic factors may therefore explain differences in the structure of vocational interests of cultural groups, especially in South Africa. Langley et al (1996:4) cited research conducted by Watson and Van Aarde (1986) supporting the above hypothesis where a positive relationship was found between socio-economic status and career maturity, in that, adolescents from higher socio-economic status showed higher career maturity.

According to Bozgeyikli et al (2009:1), the socio-economic status of parents as an economic factor may affect the early occupational adjustments and vocational influences of their children. The authors argued that socio-economic status incorporate the parents' educational attainment, career status and family income. These factors, as well as other variables, like opportunities, values and parental encouragement, can impact an individual's potential vocational status (Schoenberg et al 1984 in Bozgeyikli et al 2009:1). Studies conducted by Super and Overstreet (1960) as well as Crites (1965), support the above statement in that a higher level of career maturity is attained through the exposure to intellectually and culturally stimulating environments (Botha 1994:105). Sibilanga (2002:73) pertained that disadvantaged learners in South Africa who come from lower socio-economic groups with limited exposure to the different facets of life are unable to achieve higher levels of career maturity. Pieterse (2005:35) suggested that South African learners from disadvantaged schools are less career mature, even though they are more focused on the future compared to learners in advantaged schools who appear to be more career mature, but less focused on the future.



However, early studies conducted by Super and Nevill (1984 in Botha 1994:105) reported no significant relationship between socio-economic status and career maturity in high school learners. The authors repeated the study (1988) on university students and replicated their results that no relationship between socio-economic status and career maturity was found (Botha 1994:105).

### **3.2.3 Family**

Vondracek et al (1986 in Whiston & Keller 2004:493-494) contended that in order to understand vocational development better, the influence of the family needs to be determined. Super (1957:253) argued that family plays an important role in shaping needs and values as well as the interpersonal relationships of adolescents. Families provide resources for the implementation of self-concepts which is another predicting factor of career maturity. A functional family will raise individuals who are individuated and resilient and who will be more flexible in career choice and career certainty (Bratcher 1982 in Nichols & Schwartz 2004:440). Bratcher (1982) suggests that family rules and boundaries are influential issues that affect career choice (in Nichols & Schwartz 2004:440). Familial rules and myths guide beliefs and behaviours and predict family behaviour. When an individual becomes the object of family rules and myths he/she will be unable to differentiate their own expectations from their family's expectations. This might take place in highly collectivistic cultures where the opinions and needs of family members may directly influence an individual's personal career choices and preferences (Hardin et al 2001 in Leal-Muniz & Constantine 2005:205) and level of career maturity (Du Toit & De Bruin 2002:74). Flores and O'Brien (2002 in Leal-Muniz & Constantine 2005:206) showed that Mexican American students experience high levels of stress as they try to reconcile their vocational aspirations with their family's expectations and cultural values.

Lopez and Andrews (1987:304) have a different view in that a transaction exists between the family and the individual. The quality of family relationship dynamics as well as the level of family functioning influence occupational decisions and therefore higher levels of career maturity are expected in adolescents who are exposed to parental interaction within intact families (Miller 2006:26-27). Sumari et al (2009:12) ascertain that there are always relations, whether positive or negative, between the family environment and confidence in vocational decision-making (a dimension of career maturity). According to the authors, Malaysian students who displayed a higher self-confidence and who could make accurate self-appraisals, search for vocational information, set career goals, plan their career and engage in career problem-solving, correlated positively with the way they perceive their families. Their families were perceived as entities that encourage emotional expression, independence, academic achievement, socialising and sport, emphasise moral and religious values and who teach structure and organisation (Sumari et al 2009:1).

The discussed contextual factors namely culture, family and socio-economic status were not included in the present study for the reason that the sample was rather homogeneous with regard to culture and socio-economic status. The sample consisted of black females who originate from collectivistic cultures and families from a higher socio-economic environment. Loreto Convent School is a private catholic school and it is assumed that learners who are enrolled in this school originate from families with sufficient financial means.

### **3.2.4 Subject choice and career choice**

The career choices that adolescents have to make are decisions influenced not only by their development but also by the context in which they live (Chen 1997 in Ferry 2006). Career education today is concerned with preparing the learners for the choices and

transitions that life presents (Stead & Ngweni 1999:166) and the ability to make accurate, informed and realistic career and subject choices are a direct result of the learners' career maturity levels. The higher the career maturity level, the more likely it is that an informed career decision-making process will take place (Van de Venter 2006:24). This relates to self-knowledge that may be understood as "... the insight into one's personality which enables him/her to know what he/she is capable of" (Mbetse 2002:83). Super (in Mubiana 2010:40) stated that most career choices attempt to actualize the skills, talents and interests of one's self concept (also see chapter 2) and according to Anderson and DaGiau (in Mubiana 2010:41) understanding one's self-concept as well as its effect on different roles and relationships has a major influence on career maturity. Ziebell (2010:iv) supports the statements above in that some factors like career maturity, proactivity and career exploration positively relate to adolescents' efficacy to make career decisions. According to the author, it is imperative that parents, teachers and school counsellors, promote the factors that are related to adolescents' career choice goals, including improving career maturity, career exploration skills, proactive behaviours, supporting academic achievement, and providing emotional support to students as they engage in the career development and the career goal-setting process.

According to Watson and Stead (1997:2), career mature students tend to be more committed to the career choice process than students who are not career mature. This commitment reflects in extensive vocational planning and exploration. Thus commitment to career choices seems an important dimension of career maturity and encourages the career development tasks of crystallising (see chapter 2), specifying and implementing a career choice. According to Ferry (2006), young adults, through interaction with the context of family, school, and community, learn about and explore careers that ultimately lead to career

choice. The interdependence of family, school, and community culture play a critical role in shaping the youth's occupational choice.

The South African Department of Basic Education (2011) requires Grade 9 learners to make subject choices for the Further Education and Training phase (Grade 10-12). According to this system a learner is required to have seven subjects that include the following; four compulsory subjects namely a first/home language (e.g., English), an additional language (e.g., Afrikaans), life orientation, mathematics or mathematical literacy and three subjects that are the learner's own choice determined by what subjects the school offers. Examples of choice subjects are physical science, life sciences, geography, computer applications technology, dramatic arts and accounting to name but a few. The combination of subjects as well as the academic achievement of these subjects influences the career choice a learner will make.

There are specific admission requirements applicable to all South African universities that are stipulated by the National Department of Education. If a learner has obtained his/her National Certificate with at least four of the seven school subjects having selected from the designated list in Grade 12 and he/she has passed those four subjects with a minimum achievement level of 50%, he/she may apply to study at any South African university (University of the Free State 2013:9). Not only is the combination of subjects of essence but also the academic marks obtained in these subjects to direct a learner in the correct direction during the making a career decision-making process. Effective and realistic decision-making (a dimension of career maturity) is required for both subject choice at the end of Grade 9 and career choice at the end of Grade 12 and may be an indication whether an individual is career mature or not. It may be assumed that learners with mathematics and physical science on the required level of academic achievement, may feel more confident with regards to career choice, because this combination will allow them to enrol for almost any course at a tertiary

institution, given they pass the selection programme if applicable (University of the Free State 2013:14-25) Therefore it may be hypothesized that learners with certain subject combinations like mathematics and physical science have higher levels of career maturity because these subjects provide a gateway to many academic opportunities on tertiary level. On the contrary it may be hypothesized that learners with “softer subjects” like history and dramatic arts may be less career mature, because of the limited possibilities it offers pertaining to career choices.

Bholanath (2007:28) states that there is still a lack of understanding of the matric examination grading system and many learners are unaware of the academic implications when making a subject choice at the end of Grade 9. Subjects are often taken for reasons that are not informed by future career planning and many times due the unavailability of important subjects. This has a limiting effect on learners when it comes to making career choices at the end of Grade 12 (Mtolo 1996:7). According to Van de Venter (2006) this problem may also be attributed to Grade 9 Life Orientation teachers who are not adequately informed about the purpose and aim of the career counselling process and who do not have the necessary knowledge and skills to support learners to make informed subject and career choices and that career counselling in Grade 9 does not meet the needs of the learners.

Based on the findings of the research as discussed in this section, subject choice and career choice were included as contextual predictors of career maturity in the present study.

### **3.3 BIOLOGICAL AND PSYCHOLOGICAL FACTORS**

#### **3.3.1 Age and grade**

Age and grade are closely related and will therefore be discussed alternately in the following section. In terms of Super’s developmental approach one would expect that career maturity increases as age increases (Watson & Van Aarde 1986 in Langley 1996). For many

historically disadvantaged learners in South Africa, age alone is not an effective indicator of career maturity due to poverty, illiteracy and poor education. This might suggest that not age but rather grades present a valid predictor of career maturity. Crites (1965 in Spies 1996:42) indicated that the results in career maturity measurements (e.g., the career maturity inventory) and the level of career maturity increase as the learners progress in their school grades. Crites asserted that School Grade was the most significant index when referenced to career maturity and not age as Super before him had hypothesized (Spies 1996:42).

Cross-sectional research conducted by Cloete (1980 in Spies 1996:42) on Black Grade 8 learners and first year University students showed that career knowledge increased significantly from Grade 8 to first year university students. Langley et al (1992 in Spies 1996:42) demonstrated that a sample of Grade 8 learners on four of the five subscales of the Career Development Questionnaire had significantly lower scores than the Grade 10 group. The conclusion can thus be made that Grade 10 learners are more career mature than Grade 8 learners, which supports Crites's hypothesis that a positive relationship between school grade and career maturity exist (Spies 1996:42).

The question arises whether career maturity is influenced by grade changes and consequently more sensitive to time/grades than demonstrated thus far. To address this question the present research applied a longitudinal research design over a period of 6 months which included the participants' changing of grades. It was hypothesised in accordance to previous research that time/grade change is positively related to career maturity.

### **3.3.2 Gender**

Gender as a biological factor has been used to predict career maturity (Miller 2006:23) and Bandura (2006:13) contended that regardless of academic achievement

equality: "...there are gender differences in perceived occupational efficacy, career choice, and preparatory development". Allison and Cosette (2007:21), Patton et al (2003:74) and Super (1990:234), respectively researched the relationship between gender and career maturity. Based on their findings the authors concluded that females have to consider family and child-bearing during career decision making and that a sense of discrimination is experienced by females when career related sacrifices are made for family life.

Super (1990:234) furthers the above suggestion in that both genders appear to make decisions on the basis of their self-concepts and their concepts of the circumstances in which they live. Oyserman and Fryberg (2006:16) are of the opinion that females' self-concepts are usually more focused on relationships and by mid-adolescence the integration of future work and family roles become central. By using the Career Maturity Inventory, Lee (2001) found that female students were more developed on certain subscales than their male counterparts. Self-improvement and social services, rather than remuneration for their career selection, were more valuable to females. Females also seem to be more prepared for understanding and planning for their career choices than male students. However, Lee (2001) did not find any differences in confidence and independence between the genders in relation to career maturity. Betz and Hackett's (1983 in Scott & Ciani 2008:267) research in America suggests a gender difference in that males are more efficacious towards scientific and technological careers, whereas women are more efficacious toward careers traditionally held by women. However, a recent Nigerian study by Salami (2008:37) indicated that gender has no significant influence on the career maturity level of adolescents and young adults. The author concluded that both males and females share similar challenges with regards to career indecision like limited independence and making unrealistic career choices.

There appears to be some inconsistency with regards to the research results obtained and it can be stated that gender differences exist in varying degrees when associated to career

maturity (Patton et al 2003:75). Thus, although career counselling has become available to populations of different ages, socio-cultural status, race and gender, a better understanding of females' needs must be gained, especially those within minority groups and those of colour. If one considers traditions and cultures, females have often been constrained by traditional and cultural expectations when related to career development (Cook et al 2005:165). This supports Langley's (1988) view that career maturity should always be measured with context in mind. All participants in the present study were female and therefore gender was not conceptualized as an independent variable.

### **3.3.3 Academic achievement**

If compared to other predicting factors, there is much less literature regarding the relation between career maturity and academic achievement. Healy and O'Shea (1984 in Botha 1994:110) mentioned that career mature attitudes could be directly linked to academic and work achievement, but the authors do not elaborate how this is done. According to Langley et al (1996:4), career maturity usually increases with an increase in education, but they do not necessarily state that this "education" implies academic achievement.

A South African study conducted by Robbins et al (2003:612) on Zulu students found that these particular students have the personal need to do well in school and demonstrate considerable work commitment and individual sacrifice to achieve academically. It was found that Zulu students' future career or vocational plans were quite underdeveloped or many times absent. Absence of clear academic and career planning may have a limiting effect on success, especially within the South African context. According to the authors, vague career plans may be due to stage appropriate development of first year students who are focused on passing their classes. Another explanation for vague career planning may be that students' access to sources of information is highly limited (Akhurst & Mkhize 1999 in



Robbins et al 2003:613). This study showed that the salience of family is especially important and that Zulu students are committed to succeeding in school, but are varied in the clarity to achieve career goals and aspirations (Robbins et al 2003:614).

Osche (2003) conducted a South African study that focused on the interrelations between students' self-perceptions, their academic expectancies and academic achievement. The sample consisted of three different groups, namely academic over-estimators, academic realists and academic under-estimators. The author found that the over-estimators, who expected much higher marks, were significantly more confident about their academic expectations and perceived themselves as individuals with higher academic abilities. It was also found that humble self-assessments were more conducive to academic achievement and that the under-estimators achieved significantly higher marks than both the realists and the over-estimators. It was found that the over-estimators expected higher marks than the realists and under-estimators, but that they in actual fact gained lower marks. It was found that highly under-confident students achieved higher grades than those students who were slightly or moderately less confident. According to Osche's study, positive academic self-concept was therefore the least conducive to academic success (Osche 2003:68). Based on the above findings it can be hypothesized that learners with a realistic academic perception and/or under estimation of their academic abilities, will be more career mature than their counterparts who over-estimate their academic abilities. The reason for this may be that learners who actually achieve higher academic marks are the ones who are more realistic in their expectations, which indirectly causes them to be more career mature.

#### **3.3.4 Self-efficacy**

Self-efficacy is a person's sense of being able to deal effectively with a particular task (Woolfolk 2007:232). According to Bandura (1993:118), self-efficacy is an individuals'

perception about their capabilities to manipulate their own level of functioning and other events in their lives. Individuals' efficacy beliefs will influence how they think, feel and motivate themselves as well as their behaviour. Individuals who are confident about their ability to be successful in a task will perform better than individuals who are not confident that they have the ability (De Bruin & Bernard-Phera 2002:1). There is little evidence that Super, Crites and Langley elaborated on the relationship between self-efficacy and career maturity and it was rather Bandura and other researchers who explored the impact of the construct, self-efficacy, as a variable on career development. De Raaf et al (2009:3), view the application of Bandura's self-efficacy construct to career choices (done by Betz and Hackett in 1981) as a very significant contribution to career psychology.

A South African study conducted by De Bruin and Bernard-Phera (2002:3) included Grade 12 learners from a historically disadvantaged community. The Career Development Questionnaire was used to determine the level of career maturity and the Career Decision-making Self-efficacy Scale was used to measure self-efficacy expectations (with regard to their ability to make effective career decisions). According to De Bruin and Bernard-Phera (2002:5), Bandura's self-efficacy theory (1986) confirmed that individuals with higher self-efficacy expectations would approach and complete career developmental tasks (as put forward by Super), more efficiently than individuals with low self-efficacy expectations. On the contrary, the American researchers, Betz and Borgen (2000:330-331), contended that individuals with low self-efficacy expectations will avoid taking action and behave poorly in this area. Low self-efficacy that may lead to complete avoidance can cause the individual to give up entirely in that specific area. The individual can actually eliminate career options completely if low self-efficacy is present.

Career self-efficacy also correlates positively with other variables like career attitude, career exploration and career decidedness (these variables are dimensions of career maturity)

(Creed et al 2007:378). According to this Australian study, career maturity is also associated with higher socio-economic status, being older, being female, being more able, having more work experience, being more certain about the specific career direction pursued and having higher confidence and self-esteem. These above mentioned factors that relate to career maturity form part of the processes adolescents and young adults utilize to become career focused and more career mature (Vondracek 1993 in Creed et al 2007:379). The implication is that the positive development of career self-efficacy in adolescents will have a changing effect on their career focus indirectly resulting in an increase in career-based motivation and career maturity.

Self-efficacy as independent variable was studied in the present research in order to determine whether there is a relationship between this construct and career maturity.

### **3.3.5 Self-esteem and self-concept**

The constructs self-esteem and self-concept tend to work together with individuals' beliefs about themselves, affecting their self-concept and vice versa (Hargreaves 2006:51). Self-esteem can be viewed as the evaluative aspect of the self-concept that is the individual's acceptance of his/her own characteristics, whereas self-concept is the individual's view and evaluation of him/herself. Self-concept also includes cognitive, emotional and evaluative elements (Plug et al 1993:317-318). Super (1990:224) considered self-esteem to be a meta-dimension of self-concept, and protested against using the term self-concept as a synonym to self-esteem. The author stated that individuals who possess high self-esteem are better able to act on their interests (Super 1990:224). Individuals who are clear, stable and realistic, and who are certain about their vocational self-concepts are more able to make appropriate career choices in contrast to those with limited self-esteem who poorly match self-concept and

vocational concept. The self-concept may change over time and the fit between an individual's self-concept and career are continuous.

According to Super and Crites (1969:411), young people in developed areas (higher socio economic status) have opportunities to explore social, linguistic, mathematical, technical and business activities to some extent. These adolescents identify with parents, other adults, and peers, or may reject some of these identifications and social roles. A positive self-concept is thus the end-product of success experiences, self-mastery and engaging in positive feedback by significant others. Loving and supporting parents boost their children's feelings of self-worth, but in some disadvantaged areas the idea of support and encouragement are absent resulting in children with low self-esteem and submissiveness (Miller 2006:24-25). Self-esteem as predicting factor of career maturity was assessed in the present study using the Rosenberg Self-esteem scale. Based on previous research it is hypothesized that self-esteem positively predicts career maturity, in that, participants with high self-esteem scores were assumed to show higher scores on career maturity when compared to participants with lower self-esteem scores.

### **3.3.6 Possible selves**

Part of the self-concept is possible selves. The possible selves concept was initially introduced by Markus and Nurius (1986) in order to complement the understanding and conceptualisation of self-knowledge. Possible selves are very unique and individualized, but may also be a result of the social context within which the individual's own feelings, thoughts, and behaviours have been evaluated in comparison to significant others. Possible selves are the representation of ideas of what individuals might become, what they would like to become and what they fear of becoming (Markus & Nurius 1986:954). Possible selves are divided into positive possible selves, like the creative self or successful self, and feared

possible selves like the depressed self or the poor self. During adolescence a sense of selves begins to establish in addition to an already developed sense of the self, based on current appearance, competencies and skill.

The possible selves are commonly categorized using Oyserman's (2004:4-7) classification system as it appears in the possible selves questionnaire (also see section 4.4.6). Positive possible selves are divided into five categories namely: *achievement* that relates to school and school interactions with teachers and school activities, *interpersonal relationships* that involve family, friends, relationships and social interactions, except with teachers, *personality traits* that relate to personality characteristics and self-descriptions of traits, *physical/health related* that refers to physical health, weight and height, *material/lifestyles* that relate to material possessions and living situation, including moving, and lastly the category *Negative* that includes all negatively worded responses. The classification of the feared possible selves also includes six categories that are very similar to the positive possible selves as explained above: *achievement* relates to school and school interactions with teachers and school activities, *interpersonal relationships* involves family, friends, relationships and social interactions, except with teachers, *personality traits* relates to personality characteristics and self-descriptions of traits, *physical/health related* relates to physical health, weight and height, *material/lifestyles* relate to material possessions and living situation, including moving and the last category *non-normative/risky behaviours* that include negative and illegal behaviours such as smoking and drinking. If an individual for example, views him/herself as a successful engineer in the future, this positive possible self will be categorized under the category *achievement*, as part of the positive possible selves. If an individual fears being a bad mother to her children in the future, this feared possible self will be categorized under the category *interpersonal relationships*, as part of the feared possible selves.

During adolescent years the possible or imagined future selves become central to especially self-regulation and well-being (Oyserman & Fryberg 2006:2). This relates to Super's first developmental task namely crystallization that takes place between the ages of 14 to 18 years. The development and planning of a tentative occupational goal is prominent during crystallization (Super 1980 in Spies 1996:21). If individuals believe that their possible selves can be attained, higher self-esteem will be attained in return (Knox et al 1998 in Oyserman & Fryberg 2006:2). For example adolescents with academically oriented positive possible selves (as explained earlier in this section) are more likely to attain better grades than those individuals without these possible selves (Oyserman et al 2004 in Oyserman & Fryberg 2006:2). Socio-cultural and historical context may impact the construction of the possible selves (Markus & Nurius 1986:954) and the development of career related possible selves is one of the most salient developmental tasks in adolescence. During this time adolescents attempt to determine their identity as well as whom they would like to become (Erikson 1950 in Packard & Nguyen 2003). Similarly Super (1957) emphasized that as adolescents manifest their identities as people, their vocational identities are crystallized in parallel. This is very relevant to the current research, especially within the South African context.

Possible selves also provide a context of additional meaning for present behaviour. Attributes, abilities and actions of the self are not assessed in isolation, but their interpretation is mostly influenced by the surrounding context of possibility (Markus & Nurius 1986:963). Possible selves enhance career related interventions if the self is placed central to vocational planning and goal setting. A range of career options, like the gathering of career related information, as well as encouragement to explore the personal meaning of it, appears to be much better than having only one or two opportunities, which can be quite limiting (Meara et al 1995:259). This relates to the career maturity dimension information as

part of Super's (1980) theory. This dimension of career maturity includes the gathering of information as well as the incorporation of the collection and processing of vocational information (Botha 1994:84) (also see section 2.3.1).

Possible selves may assist individuals to conceptualize their career development. Possible selves may be integrated with mainstream career development literature like Super's life span theory (Alawadi & Medler 1994 in Meara et al 1995:265-267), but external factors like culture, subculture and self-concept components, including possible selves remain the most important aspects of their conceptualization. As mentioned in the section on the predicting factors culture and gender, it is evident that racial/ethnic groups as well as females within these groups have unique perspectives and values. According to Meara et al (1995:267-269) the personal nature of possible selves can allow counsellors to remain culturally and gender sensitive and can serve as a way to converse about racial/ethnic or gender identity. Talking about possible selves can incorporate cultural, personal and work-related interests and values, creating an opportunity to explore and integrate culture, as well as personal and career interests. Considering the statements above, the assessment of possible selves as a predicting factor was considered important in the present study. With regard to the present research, it was hypothesized that positive possible selves that relate to the category achievement (see research design) will correlate positively with career maturity. Super elaborated on the self-concept and its relation to career maturity, but not the self-concept component possible selves. To date no evidence of research done or any form of hypotheses put forward of the relation between possible selves and career maturity were found. It will therefore be valuable to research the relationship between the possible selves of the participants and their level of career maturity.

### **3.4 SUMMARY**

Chapter 3 provided a literature review of research findings relating to the various factors that may predict career maturity. Based on the evidence of the literature review, different hypotheses were constructed. The proposed hypotheses and the research methodology of the present study will be outlined in chapter 4.



## CHAPTER 4

### RESEARCH DESIGN AND DATA COLLECTION

#### 4.1 INTRODUCTION

In chapter 2 the theoretical framework pertaining to career maturity as espoused by Super (1957), Crites (1969) and Langley (1988) respectively, was elaborated upon. A literature review that summarized various studies based on the factors such as culture, socio-economic status, family, subject choice, career choice age, gender, grade, perceived and actual academic achievement, self-efficacy, self-esteem and possible selves were discussed in chapter 3.

Three research problems were identified and proposed in the present study (see chapter 1). The first problem identified was to determine which of the contextual factors (subject choice and career choice) and/or biological and psychological factors (grade, perceived and actual academic achievement, self-efficacy, self-esteem and possible selves) predict career maturity. The second research problem referred to the lack of research that exists pertaining to the relationship between the possible selves (a dimension of the self-concept) and career maturity (also see section 3.3.6). The third research problem addressed the stability of the construct career maturity as learners progress from one grade to the next taking into consideration that no intervention was implemented.

In line with the research problems the present study thus aims:

- to determine the factors that predict school-going girls' *readiness* to make choices regarding their careers. The contextual factors namely subject choice and career choice and the biological/psychological factors namely grade,

perceived and actual academic achievement, self-efficacy, self-esteem, and possible selves were included as possible predictors of career maturity;

- to establish whether a functional relationship between the positive possible self category *achievement* (Oyserman 2004) and the construct of career maturity exists; and
- to measure the stability of the construct career maturity as learners progress from one grade to the next in the absence of a career guidance intervention.

These three aims of the present research were addressed by testing seven hypotheses which derived from the literature review (see chapter 3). The hypotheses of the present study are outlined in the paragraph below.

## 4.2 HYPOTHESES

McMillan and Schumacher (2006:59-60) argue that a hypothesis should state the direction of a relationship. According to the authors, this relationship should be testable and must be able to offer a tentative explanation based on the theoretical frameworks and literature review that are relevant to the study. Research hypotheses are derived from the literature review providing the researcher with information about relationships between the theoretical constructs.

Based on the literature review in chapter 3, the following hypotheses were proposed:

- Hypothesis 1**      Learners who have chosen science-orientated subjects (mathematics and physical science), score significantly higher on career maturity than learners who have not chosen science-orientated subjects.
- Hypothesis 2**      Learners who already have a career choice score significantly higher on career maturity than learners who do not have a career choice yet.

- Hypothesis 3** Stability of career maturity should express itself in a lack of change in the learners' career maturity level when progressing from one grade to the next.
- Hypothesis 4** The discrepancy between perceived and actual academic achievement is negatively correlated to career maturity. More specifically, learners who show large discrepancies between perceived and actual academic achievements score significantly lower on career maturity than learners with small discrepancies.
- Hypothesis 5** There is a significant positive relationship between self-efficacy and the level of career maturity.
- Hypothesis 6** Self-esteem is significantly positively correlated with career maturity.
- Hypothesis 7** Positive possible selves stand in a functional relationship with career maturity. More specifically, participants who name positive possible selves referring to *achievement*, score significantly higher on career maturity than participants who name positive possible selves referring to the other classifications.

The proposed hypotheses were tested by the means of quantitative data generated by a combination of a longitudinal and cross-sectional survey design. The hypothesis referring to the stability of career maturity was tested by the means of longitudinal data whereas the hypotheses addressing the relationships between the independent variables, namely the contextual factors (subject choice and career choice) and the biological and psychological factors (grade, perceived and actual academic achievement, self-efficacy, self-esteem and possible selves) and the dependent variable of career maturity were tested by cross-sectional data.

In the following paragraph the research design used in the present research is discussed in detail.

#### **4.3 RESEARCH DESIGN**

Quantitative research design was used in the present study. McMillan and Schumacher (2006:10) describe the characteristics of quantitative research as follow:

- The explanation of the data collection methods as well as the analysis thereof.
- Being precise in administering the measurements and statistical methods.
- Verifiable: the results of quantitative research can be verified. Replication of a study is possible in order to verify initial results.
- Parsimonious in that simplistic explanations rather than complicated explanations should be used.
- Data that is collected are empirical.
- Reasoning that is logical and that conditional conclusion are made when using quantitative research.

The survey design (as non-experimental research design) was most relevant and therefore used in the present study. Surveys are commonly used to explain relationships between phenomena but exclude the manipulation of variables (Schumacher & McMillan 1993:34). Surveys are also classified as descriptive design. The descriptive design only describes phenomena. The purpose of most descriptive research is to characterize something exactly as it is. According to McMillan and Schumacher (2006:24), the descriptive research design is objective in data collection, quantifies variables and describes phenomena using numbers.

Due to the data collection in the present study which was non-representative in nature and limited to one school, that is to say a single unit, the present research can also be

described as a case study. The following paragraph will define case studies as a methodological approach.

#### **4.3.1 Case study**

According to Babbie and Mouton (2001:640) a case study is an investigation of a single unit and Merriam (1991:11) suggests the following main aspects of a case study:

- It is particular with the focus on a particular situation (possible predicting factors and career maturity), for instance, particular students (grade 10 – 12 learners) in a particular school (e.g., Loreto Convent School).
- The description of the phenomenon is usually the end product of the case study.
- New understanding, new meaning or confirming and extending what is already known about the phenomenon is brought about. Previous information may be verified and/or replicated in a case study.

The present study is a case study as only the Grade 10 – 12 learners from Loreto Convent School were included in the research. In the following paragraph, the sample of the present study is described in detail.

#### **4.3.2 Sampling and Sample**

Sampling is commonly described as “taking a portion of a population or universe” (De Vos et al 2002:203). According to McMillan and Schumacher (2006:125) one type of sampling is convenience sampling. This pertains to a selected group of participants because of its accessibility but not representativeness. Convenience sampling was used in the present study as the researcher had easy access to the participants.

The present study was conducted with learners from Loreto Covent School in Pretoria, which is a single gender school for girls. In total, 142 learners participated in both

the longitudinal and cross-sectional data collection. The participants were on average 16.62 years old (ranging from 15 to 18).

#### **4.3.3 Procedure and data collection**

Date was collected at two different times. The first data collection was conducted in August 2012. At this time the Career Development Questionnaire was used to assess career maturity. The questionnaire was given to learners in Grade 10 and 11 (this will be referred to as time 1). Six months later (March 2013) the second data collection was conducted assessing career maturity and all independent variables with the same learners (this will be referred to as time 2). Learners surveyed at time 1 had progressed to their next grades when surveyed at time 2 (e.g., learners in Grade 10 at time 1 were learners in Grade 11 at time 2; and learners in Grade 11 at time 1 were learners in Grade 12 at time 2).

Two questionnaires were used. Questionnaire 1 (Career Development Questionnaire) was used to assess the various dimensions of career maturity (assessed at time 1 and at time 2) and a second questionnaire was developed and compiled including all independent variables (assessed at time 2). The Career Development Questionnaire scores were calculated and written on the answer sheets (measures at time 1 and time 2, respectively). Learners were asked to write down their Grade and class e.g., Grade 11 V, their age, favourite colour and favourite animal at the top of these answer sheets. Participants were expected to do the same for the second questionnaire (measuring at time 2) in order for the researcher to match the respondents' answer sheets at time 1 with the same respondents' completed questionnaires at time 2. The second questionnaire assessed age, grade, career choice, self-esteem, self-efficacy, possible selves, subject choice, perceived and actual academic achievement.

The questionnaires at time 1 and time 2 were administered during school time. Learners were informed about the goal of the study and how to fill in the questionnaires.

Learners were given sufficient time to fill in the questionnaires in the presence of the Life Orientation educator and the researcher. Prior to the data collection the requirements for ethical considerations were fulfilled. The next paragraph will discuss the ethical requirements.

#### **4.3.4 Ethical considerations**

Ethics pertain to a body of principles of right, proper or good conduct (Cohen & Swerdik 2010:54). According to Cohen and Swerdik (2010:66-70) a respondent that is involved in a research study has the right:

- to give informed consent;
- to be informed of the results;
- the right to privacy and confidentiality; and
- not to be labelled in a stigmatizing manner.

Ethical clearance for the study was obtained from the University of South Africa (see appendix A) and the principal of the school (see appendix B). Consent letters were signed by parents (see appendix C) and returned to the researcher giving their consent to allow their daughters to participate in the present study. Assent letters (see appendix D) were signed by learners and returned to the researcher whereby they agreed to participate (voluntarily) in the study.

#### **4.3.5 Research instrument**

The following paragraphs will report on the various scales used to measure both the independent and dependent variables in the present study. Prior to this reporting, the concepts of validity and reliability will be addressed.

#### **4.3.6 Validity**

Validity is a general term used to refer to the judgement of how well a test or measurement tool measures what it is supposed to measure. This judgement has important implications regarding the appropriateness of inferences made and actions taken on the basis of measurements (Cohen & Swerdik 2010:108-110). Content validity is how adequately a test (or other measurement tool) measures behaviour representative of the universe of behaviour it was designed to measure (Cohen & Swerdik 2010:173-176). Construct validity deals with the appropriateness of inferences drawn from test scores regarding individual standings on a variable called a construct. A construct is an informed, scientific idea developed or hypothesized to describe or explain behaviour (Cohen & Swerdik 2010:193). The validity of the measures used will be further elaborated upon below.

#### **4.3.7 Reliability**

Reliability is the extent to which measurements are consistent or repeatable as well as the extent to which measurements differ from occasion to occasion as a function of measurement error (Cohen & Swerdik 2010:107). Reliability also refers to the internal consistency of the scale (Lounsbury et al 2006). In essence, reliability is a minimum criterion for scale validity (Lounsbury et al 2006). Rightfully, Pedhazur and Schmelkin (1991:81) state that a “measure cannot be valid, if it is not reliable”. According to Lounsbury et al (2006), Cronbach’s alpha or alpha coefficient is the most commonly used technique in estimating internal-consistency reliability in psychological research. In the present study, the reliability of all scales was estimated using Cronbach’s alpha technique. The reliability of each of the relevant factors and the construct career maturity will be reported on in the section below.



#### **4.4 MEASUREMENTS AND CRONBACH'S ALPHAS (where applicable)**

##### **4.4.1 Career Maturity**

Career maturity was assessed using the Career Development Questionnaire designed and standardised for South Africa by Langley et al (1996). The Career Development Questionnaire is used to determine the level of career maturity that the person has achieved. It consists of 100 items assessing five dimensions of career development: self-information; decision making; career information; integration of self-information with career information and career planning. Each of these dimensions relates to one or more of the previously mentioned career developmental tasks that lead to career maturity. The response statement for each item is a *True* if the participant agrees with the statement or a *False* if the participant disagrees with the statement. Participants were required to shade the oval space that corresponds to their response. Due to copyright regulations the Career Development Questionnaire is not included in the appendices.

Self-information concerns the participants' knowledge of, for example the importance of life roles, work values and occupational interests. "I want to choose an occupation that allows me to do what I believe in" is an example of the items from this subscale. The dimension decision making deals with the ability to make effective decisions. "I am an effective decision maker" is an example of the items from this subscale. Career information evaluates the participant's knowledge of the world of work. An example of the items used in this subscale is "I know what the most suitable training would be for the occupation that I am interested in". Integration of self-information with career information queries the participant's ability to integrate information about her with information from the world of work. "I know how my interests and abilities might relate to different kinds of jobs" is an example of the items used in this subscale. The dimension career planning assesses the participant's ability to make a career decision and the implementation of a career plan. An

example of the items for the subscale career planning is “I regard career planning as a process that continues throughout life”.

The maximum score for each of the five sub-scales of the Career Development Questionnaire is 20 which indicates career maturity. The total score (of all the five sub-scales) can be divided by 5 to obtain the mean of these scales. Langley et al (1996) provide the following guidelines for interpreting the Career Development Questionnaire scores:

- A score of 15–20 on any of the scales indicates that the testee’s knowledge or ability with regard to that scale is adequate.
- A score of 11–14 on any of the scales indicates that the testee’s knowledge or ability with regard to that scale can be improved.
- A score of 7–10 on any of the scales indicates that the testee’s knowledge or skill with regard to that scale is inadequate.
- A score of 0–6 on any of the scales indicates that the testee has little knowledge with regard to that scale.

Langley et al (1996:17) reported correlations between the sub-scales ranging from .45 (between scale self-information and career planning) to .65 (between scale career information and career planning) (Langley et al 1996:17). The correlations in the present study ranged from .61 (between the sub-scales integration and career planning) to .75 (between sub-scale self-information and decision making) at time 1. At time 2 the correlations ranged from .41 (between sub-scale self-information and career planning) to .68 (between sub-scale self-information and decision making).

According to the guideline of the Career Development Questionnaire manual, content validity in this study was addressed using the following approach (Langley et al 1996):

- The items were carefully examined for face validity. To support this procedure a

literature study on career development and career maturity was conducted, and the relevant theories were used to construct a framework.

- The wording of items and each item was entered into the framework according to the underlying dimensions that had been identified.
- The item scale correlations were examined.

Results of a confirmatory factor analysis conducted by De Bruin and Bernard-Phera (2002) supports the construct validity of the Career Development Questionnaire based on their research among previously disadvantaged youths within the South African context. This suggests that the theoretical construct of career maturity kept its meaning within the South African context which is very different from the USA where “career maturity” and the measurement thereof initially originated from (De Bruin & Bernard-Phera 2002).

#### **4.4.2 Socio-demographic information**

Learners were asked to indicate their gender, age and grade. They were further asked whether they know what career they want to pursue; whether they plan to study at a tertiary institution; and whether they know what they want to study using yes and no answers (i.e., career choice). Lastly they were asked to indicate what they want to study using an open-ended answer format. Race was not assessed because all girls at Loreto Convent School are black.

#### **4.4.3 Perceived and actual academic achievements**

Perceived versus actual academic achievements were assessed by asking the participants about their previous exam results in the various subjects offered by the school. Four compulsory subjects namely English, Afrikaans, life orientation, mathematics or mathematical literacy are prescribed by the South African Department of Basic Education (2011) for each learner. The remaining three subjects for each participant is chosen by the

learner herself from the following subjects offered by Loreto Convent School: business studies, accounting, life sciences, physical science, geography, history, dramatic arts and computer application technology. These self-reported academic achievements for each of the seven subjects per participant were compared to the actual subject results provided by the school. A difference score was calculated for each participant by subtracting the self-reported academic score from the score provided by the school. In a second step an overall difference score was calculated by the sum of the subject-related difference scores. Positive values refer to an underestimation of academic achievement by the participant whereas a negative score indicates an overestimation of academic achievement. From the above information the researcher was able to establish the subject combination for each learner. Based on the subject combinations as indicated on the questionnaire, learners were divided into two groups. The first group was labelled “science oriented” and consisted of participants with mathematics and physical science as their majors. The second group was labelled “not science oriented” because it consisted of participants with subjects like e.g., history and dramatic arts.

#### **4.4.4 Self-efficacy**

Self-efficacy was assessed using the General Self-Efficacy Scale developed by Schwarzer and Jerusalem (1995). The scale consists of 10 items. An item example is “I can always manage to solve difficult problems if I try hard enough”. The full scale is reported in appendix F. The answer format used was a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Previous studies revealed Cronbach’s alphas ranging from .76 to .90 (Schwarzer & Jerusalem 1995). The reliability analysis in the present study revealed that one item (“If I am in trouble, I can usually think of a solution”) showed an unexpected negative corrected item-total correlation. Further analysis showed that a second item (“If someone opposes me, I can find the means and ways to get what I want”) showed very low

corrected item-total correlation. It seemed that the participants in the present study struggled to make sense of the “If-sentence structure” which might be caused by the fact that the majority of learners do not speak English as mother tongue. It was therefore decided to remove these two items from the scale and any further analysis. The remaining 8-item scale revealed a Cronbach’s alpha of .71, which is considered as being sufficient.

#### **4.4.5 Self-esteem**

Self-esteem was assessed using the Rosenberg Self-Esteem scale consisting of 5 positive worded items (e.g., “I feel that I have a number of good qualities”) and five negative worded items (e.g., “I feel I do not have much to be proud of”) (Rosenberg 1965). The answer format used was a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The items of the self-esteem scale are reported in appendix F. In a first step of analysis all negative worded items were reversed. Previous research reported Cronbach’s alphas ranging from .88 to .90 (Robbins et al 2003: 153). The Rosenberg Self-Esteem scale in the present study reached a Cronbach’s alpha of .75.

#### **4.4.6 Positive and Negative Possible selves**

Positive and negative possible selves were assessed following the procedure suggested by Oyserman (2004:3). Participants were informed about what possible selves are in the introduction of the possible selves section in the questionnaire (see appendix F). It was explained to the participants that people have some image or picture of what they will be like (positive possible selves) or what they want to avoid (feared possible selves) in future. They were asked to name up to four possible future selves (and up to four feared possible selves). After providing an answer they were asked, using a yes/no answer format, whether they were doing something about achieving/avoiding their possible self. If the participants answered yes they were further asked to write down their strategy, in other words, what they are doing

in order to reach their envisaged possible self (or avoid the feared possible self). For the present research the instruction was altered and the sentence “next year, I expect to be” was changed to “in the future, I expect to be” for the positive possible selves. The sentence “next year, I want to avoid” was changed to “in the future, I want to avoid” for the feared possible selves.

The possible selves were categorized using the classification system as proposed by Oyserman (2004:4-7). The first category, *achievement*, relates to school and school interactions with teachers and school activities. Examples of responses for the first category are “Get a university entry” and “Successful”. The second category is *interpersonal relationships* that involve family, friends, relationships and social interactions, except with teachers. “Married” and “Good mother” are examples of responses categorised as Interpersonal relationships. The third category, *personality traits*, relates to personality characteristics, self-descriptions of traits. “Confident” and “Independent” are examples of responses in this category. The fourth category, *physical/health related*, refers to physical health, weight and height. Examples like “Thin” and “Athlete” were responses categorised as physical/health Related. The fifth category, *material/lifestyles*, relates to material possessions and living situation, including moving. Examples of responses categorised as material/lifestyles are “Living a better lifestyle than I am now” and “A car owner”. The sixth category, *negative*, includes all negatively worded responses. No responses in this category were recorded in the present study. The classification of the feared possible selves includes six categories. The first category, *achievement*, relates to school and school interactions with teachers and school activities. “Not finishing University” and “Unemployment” are examples of this category. The second category, *interpersonal relationships*, involves family, friends, relationships and social interactions, except with teachers. “Divorce” and “Being dependent on my parents” are examples categorised as interpersonal relationships. The third category,

*personality traits*, relates to personality characteristics and self-descriptions of traits. Examples like “Negativity” and “Ignorant” were categorized as Personality Traits. The fourth category, *physical/health related*, relates to physical health, weight and height. “HIV” and “Being unhealthy and unfit” are examples. The fifth category, *material/lifestyles*, relates to material possessions and living situation, including moving. “Being poor” and “Living in South Africa” are examples of responses categorized as material/lifestyles. The sixth category is *non-normative/risky behaviours*, which includes negative and illegal behaviours such as smoking, drinking, fighting, gangs, etc. Examples of responses are “Crime” and “Drugs and alcohol”.

Two independent raters classified the possible selves using the outlined classification system. The inter-rater reliability for positive possible selves were  $Kappa = .80, p < .001$ , for the first named positive possible selves;  $Kappa = .86, p < .001$ , for the second named;  $Kappa = .80, p < .001$ , for the third named;  $Kappa = .73, p < .001$ , for the fourth named.

The results further revealed that the inter-rater reliability for the feared possible selves were the following;  $Kappa = .81, p < .001$ , for first named feared possible selves;  $Kappa = .81, p < .001$ , for the second;  $Kappa = .81, p < .001$ , for the third;  $Kappa = .71, p < .001$ , for the fourth.

All ambiguous cases were discussed by the two raters until agreement was reached. Examples of ambiguous responses of the positive possible selves were “Happy” and “To know God more”. Both these responses were categorised under *materialistic/lifestyle* as it was decided that both were a personal choice that form part of a person’s lifestyle. Examples of ambiguous responses of the feared possible selves were “Greedy and Selfish” that were finally coded under the category *personality traits*. “Being pregnant or married before completing my studies” is another example that was finally categorised by the two raters as *Non-normative/Risky behaviour*.

## **4.5 SUMMARY**

In chapter 4 the research design used in the present research was discussed. The various hypotheses were introduced. The selection of the sample, the data collection methods, ethical considerations and measurements were elaborated upon. The results of the present research will be reported and discussed in chapter 5.



## CHAPTER 5

### RESEARCH RESULTS

#### 5.1 INTRODUCTION

Chapter 5 will provide the results generated by the cross-sectional and longitudinal survey design in the present study. First the chapter reports the results of the preliminary analysis which is based on descriptive statistics (i.e., means, standard deviations, correlation coefficients etc.); while the second part of this chapter presents the results of the hypotheses testing which is based on inferential statistics (i.e., independent samples t-test, paired sample t-test, regression analysis etc.). Thirdly, a qualitative interpretation of the results will be presented.

#### 5.2 PRELIMINARY ANALYSIS

In a first step the preliminary data analysis was conducted with all principal variables directly measured in the present study. These variables included self-efficacy, self-esteem and career maturity. Table 3 reports the means, standard deviations, maximum and minimum scores as well as the Pearson's correlations coefficients.

Table 3. Means, standard deviations, and correlation coefficients of the principal variables

	Self-esteem	Self -efficacy	Career maturity
Means	3.85	3.9	14.58
Standard Deviation	0.57	0.45	3.00
Minimum	2.5	2.5	7
Maximum	5	4.88	19.60
Self-esteem	1		
Self-efficacy	.37	1	
Career Maturity	.49	.41	1

Note: all correlation coefficients were significant  $p < .001$

In a second step of the preliminary data analysis the career maturity dimensions which were assessed at two different times were analysed. Table 4 reports the means, standard deviations, maximum and minimum scores as well as the Pearson's correlations coefficients.

Table 4. Means, standard deviations, and correlation coefficients of the five career maturity dimensions at time 1 and time 2

	Self-Information		Decision Making		Career Information		Integration		Career Planning	
	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
Means	14.19	14.69	14.46	14.75	13.81	13.86	15.92	15.70	13.35	13.89
Standard Deviation	2.91	3.26	3.76	3.99	3.74	4.02	3.24	3.46	3.48	3.73
Minimum	6	6	3	3	5	2	5	7	4	0
Maximum	20	20	21	20	20	20	20	20	20	20
Self-Information 1	1									
Self-Information 2	.69	1								
Decision Making 1	.75	.60	1							
Decision Making 2	.56	.68	.61	1						
Career Information 1	.63	.47	.69	.51	1					
Career Information 2	.54	.53	.56	.62	.68	1				
Integration 1	.61	.55	.64	.55	.63	.48	1			
Integration 2	.50	.58	.51	.57	.39	.57	.52	1		
Career Planning 1	.65	.53	.59	.59	.67	.58	.61	.44	1	
Career Planning 2	.44	.41	.44	.49	.44	.63	.29	.62	.55	1

Note: all correlation coefficients were significant  $p < .001$

### 5.3 HYPOTHESES TESTING

In the following section the seven hypotheses which were derived from the literature review were tested sequentially. The following inferential statistical tests were used: independent samples t-test, paired samples t-test; Pearson's correlation, and multiple regression analysis.

#### 5.3.1 Testing of Hypothesis 1

Hypothesis 1 stated that participants who choose science-orientated subjects (mathematics and physical science), score higher on career maturity when compared to learners who do not choose science-orientated subjects. In line with the school practice, participants were distinguished between those who chose mathematics and those who chose mathematical literacy. At the school mathematics is considered a pre-condition to register for physical science. The science oriented group consisted of 74 participants and the non-science group of 65 participants. Table 5 reports the means (standard deviations) for the five career maturity dimensions for both groups as well as the results of the independent samples t-tests.

Table 5. Science-orientation and career maturity

Subscales	Science oriented (n=73)	Non science oriented (n=63)	Independent samples t-test
Self-Information	15.20 (2.94)	14.03 (3.53)	$t(134)= 2.11, p<.05$
Decision Making	15.30 (3.58)	13.98 (4.32)	$t(134)= 1.94, p= .05$
Career Information	14.32 (3.88)	13.39 (4.11)	$t(134)= 1.35, p>.05$
Integration	15.94 (3.26)	15.38 (3.74)	$t(134)= 0.93, p>.05$
Career Planning	14.46 (3.10)	13.23 (4.27)	$t(134)= 1.93, p= .05$

Hypothesis 1 was confirmed for the career maturity dimensions self-information, decision making and career planning, in that participants who were in the science-oriented group scored significantly higher on these three dimensions of career maturity when compared to the participants who were classified as non-science oriented (see t-statistic in Table 5). No significant differences were found for the dimensions career information and integration.

### 5.3.2 Testing of Hypothesis 2

Hypothesis 2 postulated that learners who demonstrate career choice score higher on career maturity than learners who have no or are uncertain about their career choice. In total 89 participants showed career choice by answering the question: “Do you know what career you want to pursue?” with “yes”. Fifty participants answered the question with being uncertain and three with no. The participants who answered with *being uncertain* and *no* were collapsed into one group labelled as *no career choice*. Table 6 reports the means (standard deviations) for the five career maturity dimensions for both groups as well as the results of the independent samples t-tests.

Table 6. Career choice and career maturity

Subscales	Career choice (n=86)	No career choice (n=52)	Independent samples t-test
Self-Information	15.73 (2.89)	12.98 (3.14)	$t(136)= 5.24, p<.001$
Decision Making	16.34 (3.09)	12.19 (4.01)	$t(136)= 6.74, p<.001$
Career Information	15.22 (3.56)	11.61 (43.75)	$t(136)= 5.64, p<.001$
Integration	16.76 (2.91)	13.94 (3.62)	$t(136)= 5.03, p<.001$
Career Planning	14.77 (3.59)	12.44 (3.52)	$t(136)= 3.72, p<.001$

Hypothesis 2 was confirmed in that participants who demonstrated career choice scored significantly higher on all five career maturity dimensions than participants who showed no career choice (see t-test statistic in Table 6).

In order to determine whether subject-choice and career choice are independent constructs a Chi-Square test was conducted. Table 7 summarises the observed and expected frequencies. The Pearson Chi-Square Test,  $X^2(1) = 0.39, p > .05$ , was not significant which suggests that subject-choice and career choice are not interrelated. The latter means that career choice does not depend on subject choice, that is to say, whether learners do choose science-oriented subjects or not.

Table 7. Subject and career choice: observed and expected frequencies

		Career choice				
		Career choice		No career choice		
		Count	Expected count	Count	Expected count	Total
Subject choice	Science-oriented	44	45.8	30	28.2	74
	Non science-oriented	42	40.2	23	24.8	65
Total		86		53		139

### 5.3.3 Testing of Hypothesis 3

The third hypothesis tested the stability of career maturity which was assumed to express itself in the lack of change over time (H3). This hypothesis was tested using the paired samples t-test by which the scores of the five subscales from time 1 were compared with the scores at time 2. Table 8 depicts the results.

Table 8. Comparison of career maturity between time1 and time 2

Subscales	Mean(SD) at Time 1	Mean (SD) at time 2	Paired samples t-test
Self-Information	14.17 (2.92)	14.66 (3.29)	$t(133) = -2.23, p < .05$
Decision Making	14.39 (3.77)	14.80 (3.95)	$t(133) = -1.40, p > .05$
Career Information	13.82 (3.76)	13.99 (3.98)	$t(133) = -0.64, p > .05$
Integration	15.88 (3.25)	15.72 (3.45)	$t(133) = 0.55, p > .05$
Career Planning	13.33 (3.48)	14.00 (3.72)	$t(133) = -2.27, p < .05$

The results indicate that hypothesis 3 was partially confirmed since a statistically significant increase was demonstrated for the career maturity dimensions, self-information and career planning. Participants showed significantly higher scores of self-information and career planning at time 2 when compared with time 1. No significant changes were found for decision-making, career information and integration.

#### 5.3.4 Testing of Hypothesis 4

Hypothesis 4 stated that the discrepancy between perceived and actual academic achievement is negatively correlated with career maturity. More specifically, learners who show large discrepancies between perceived and actual academic achievements were assumed to score lower on career maturity than learners with small discrepancies. As outlined in the method section the difference score was calculated by subtracting the self-reported academic score from the score provided by the school for each participant. In a second step an overall difference score was calculated by the sum of the subject-related difference scores. Positive scores refer to an underestimation of academic achievement whilst negative scores indicate an overestimation of academic achievement.

Of the 142 participants a total of 105 overestimated their academic achievements (73.9%), whereas 25 participants (17.6%) underestimated their academic achievements. Only 6 participants showed zero discrepancy between their perceived and actual academic achievements (4.2%).

In the second step all differences were reversed into positive scores. In order to distinguish between over - and under-estimators the median split was calculated for the present sample. Based on this information two groups were created (Median = 21). The discrepancies for group 1 ranged from 0 to 21. This group was considered to show relatively small discrepancies. The discrepancies for group 2 ranged from 22 to 155. This group was considered to show relatively large discrepancies. Table 9 reports the means (standard deviations) for the five career maturity dimensions for both groups as well as the results of the independent samples t-tests.

Table 9. Group comparison between group 1 and group 2

Subscales	Small discrepancies between perceived and actual academic achievement (n=71)	Large discrepancies between perceived and actual academic achievement (n=64)	Independent samples t-test
	Mean (SD)	Mean (SD)	
Self-Information	14.97 (2.87)	14.34 (3.67)	$t(133)= 1.11, p>.05$
Decision Making	15.54 (3.07)	13.82 (4.71)	$t(133)= 2.53, p<.05$
Career Information	14.29 (3.52)	13.53 (4.49)	$t(133)= 1.10, p>.05$
Integration	15.90 (3.39)	15.53 (3.61)	$t(133)= 0.61, p>.05$
Career Planning	13.77 (3.67)	14.15 (3.83)	$t(133)= -0.59, p>.05$



Hypothesis 4 was only confirmed for the career maturity dimension of career decision making (see t-statistics in Table 9). Participants who showed small discrepancies between perceived and actual academic achievement scored significantly higher on the decision making dimension than participants who showed large discrepancies.

### 5.3.5 Testing of Hypothesis 5

The fifth hypothesis stated that career maturity (at time 2) is positively associated with self-efficacy. This hypothesis was tested using Pearson's correlation. The results as summarized in Table 10 show that all relationships were significant which suggests that hypothesis 5 was confirmed. According to the guidelines proposed by Cohen (1988 cited in Pallant 2005:126), the strength of the correlations between self-efficacy and self-information, decision making, career information and career planning was medium in size, whereas, the strength of the correlation between self-efficacy and integration should be interpreted as small.

Table 10. Correlation between career maturity and self-efficacy

Subscales	Correlation coefficient (r)
	Self-efficacy
Self-Information	$r = .34, p < .001$
Decision Making	$r = .41, p < .001$
Career Information	$r = .32, p < .001$
Integration	$r = .26, p < .001$
Career Planning	$r = .37, p < .001$

### 5.3.6 Testing of Hypothesis 6

The sixth hypothesis stated that self-esteem correlates positively with the various dimensions of career maturity. The results as summarized in Table 11, indicate that the hypothesis 6 was confirmed. Using the guidelines proposed by Cohen (1988 cited in Pallant 2005:126), it can be concluded that all relationships showed medium strength.

Table 11. Correlation between career maturity and self-esteem

Subscales	Correlation coefficient (r)
	Self-esteem
Self-Information	$r = .41, p < .001$
Decision Making	$r = .41, p < .001$
Career Information	$r = .38, p < .001$
Integration	$r = .43, p < .001$
Career Planning	$r = .39, p < .001$

### 5.3.7 Testing of Hypothesis 7

Hypothesis 7 stated that positive possible selves stand in a functional relationship to career maturity. More specifically, it was predicted that participants who name positive possible selves referring to *achievement*, score higher on career maturity than participants who name positive possible selves referring to the other categories of the classification system proposed by Oyserman (2004).

The first step of the analysis focused on the distribution of possible selves according to the used classification system. According to the results in Table 12 the majority of participants reported achievement related possible selves as their first and second response. The results also suggest that positive possible selves related to *health/physical* are not as

important to the participants in the present study. The results further suggest feared possible selves were more equally distributed over the various categories.

Table 12. Frequencies of positive and negative possible selves

	Positive possible selves				Negative possible selves			
	1	2	3	4	1	2	3	4
Achievement	101	71	47	41	30	25	30	17
Interpersonal relationships	15	16	41	43	24	34	24	28
Personality Traits	8	21	23	19	26	30	22	27
Physical/Health Related	2	4	6	4	13	9	11	16
Materialistic/Lifestyles	15	27	21	25	24	16	17	12
Non-normative/ risky behaviour					19	19	21	17

In order to test hypothesis 7, we identified those participants who named achievement related possible selves in their first and second response. In total 46 participants fulfilled this criterion. These 46 participants were compared to the remaining sample with regard to their career maturity. In order to confirm hypothesis 7, it was assumed that those 46 participants should score significantly higher on career maturity when compared to the remaining sample. An independent samples t-test was conducted for each career maturity dimension to test this assumption. Table 13 reports the means (standard deviations) for the five career maturity dimensions for both groups as well as the results of the independent samples t-tests.

Table 13. Comparison between achievement-oriented and non-achievement oriented participants

	Achievement-orientated (n =46)	non achievement-oriented (n = 54)	Independent samples t-test
Subscales	Mean (SD)	Mean (SD)	
Self-Information	15.81 (3.10)	14.49 (3.03)	$t(95) = - 2.12, p < .05$
Decision Making	15.65 (4.06)	14.62 (3.97)	$t(95) = - 1.26, p > .05$
Career Information	15.02 (3.60)	13.30 (3.82)	$t(95) = - 2.26, p < .05$
Integration	16.84 (2.93)	15.47 (3.34)	$t(95) = - 2.12, p < .05$
Career Planning	14.77 (3.37)	13.45 (3.68)	$t(95) = - 1.82, p > .05$

Hypothesis 7 was confirmed for the career maturity dimensions of self-information, career information and integration. As the results in Table 13 indicate participants who were classified as achievers, scored significantly higher on self-information, career information and integration when compared to the participants classified as others. No statistically significant differences were found for the dimensions decision making and career planning.

### 5.3.8 The relationship between independent and dependent variables

In the final analysis career maturity was regressed on the independent variables of age, grade, subject choice, career choice, perceived and actual academic achievement, self-efficacy, self-esteem and possible selves. Prior to the regression analysis, the sample size to conduct multiple regressions with eight independent variables was estimated. According to Tabachnick and Fidell's (2001:117) proposed formula, a minimum of 114 cases (participants) were required. With a sample size of 142 participants the present study fulfilled this requirement. The data was tested for multicollinearity (i.e., all correlations between the

independent variables were smaller than .9), normality, linearity and homoscedasticity. The latter three requirements were tested using the residual scatterplots.

The regression model reached statistical significance,  $F(8,85) = 6.62, p < .001$ , which indicates that the null hypothesis, which assumes that multiple R in the population equals zero was rejected. The model explained a total of 38.4% variance of career maturity. Table 14 reports the standardized coefficients for the independent variables, as well as the t-statistic.

Table 14. Standardized coefficients of the regression model

Independent variables	Beta	t-value	Sig. (p)
Age	.04	0.34	.73
Grade	.12	1.04	.30
Career choice	-.33	-3.59	.00
Self-efficacy	.17	1.86	.06
Self-esteem	.19	1.96	.05
Possible selves	.16	1.80	.07
Science groups	-.11	-1.21	.23
Perceived and actual academic achievements	-.01	-0.12	.90

The results indicate that self-esteem and career choice were the only significant predictors in the present model. Self-efficacy and possible selves reached only marginal significance. Career choice was the strongest predictor in the model (Beta=-.33). Due to the coding of the variable career choice (1= career choice vs. 2= no career choice) this result means that demonstrating career choice predicts career maturity. The second significant predictor was self-esteem (Beta=.19), which indicates that the more participants have self-

esteem the more they are career mature. The results for the marginally significant independent variables, possible selves (Beta=.16) and self-efficacy (Beta=.17), suggest that the more the participants show self-efficacy and those who choose achievement oriented possible positive selves show more career maturity.

In order to identify how much variance of career maturity is explained by the four independent variables, a step-wise multiple regression was conducted. Model 1 included career choice as independent variable, Model 2 included career choice and self-esteem as independent variables, Model 3 included career choice, self-esteem and self-efficacy as independent variables and Model 4 included career choice, self-esteem, self-efficacy and possible selves as the independent variables. The F change statistics are reported in Table 15.

Table 15. Change statistics of the step-wise multiple regression

Model	R square change	F change	Df1	Df2	Sig. F-Change
1	.21	25.24	1	95	.000
2	.09	12.28	1	94	.001
3	.04	5.31	1	39	.023
4	.02	2.49	1	92	.118

The F change statistics show that career choice explains the majority of variance (21%) of the dependent variable career maturity (Model 1). Self-esteem explains 9% which contributed significantly to the explained variance (Model 2). Self-efficacy added another 4% which also significantly changed the explained variance of the dependent variable (Model 3). However, the contribution to the explained variance of career maturity by possible selves (2%) was not significant (Model 4). These results suggest that career maturity is strongly

associated with career choice. That is to say learners who have a clear plan about their future career show more career maturity.

## **5.4 QUALITATIVE INTERPRETATION OF THE EMPIRICAL FINDINGS**

In the following section the empirical findings of the current research will be discussed.

### **5.4.1 Hypothesis 1**

The first hypothesis stated that participants with science-oriented subjects will score higher on career maturity than those participants who did not choose science-oriented subjects. According to previous research as indicated in chapter 3, subject choices are often made for the wrong reasons which result in uninformed and limited career planning by learners (Bholanath 2007; Mtolo 1996:7). Hypothesis 1 of the present study was partially confirmed in that the science-oriented group (those who are enrolled for mathematics and physical science) scored significantly higher on the dimensions self-information, decision making and career planning of career maturity than their non-science oriented counterparts. The two groups did not differ in the dimensions career-information and integration. These results suggest that science-oriented learners show relatively more knowledge with regard to their life roles, work values and vocational interest (self-information), that they have relatively more ability to make effective decisions (decision-making) and that they are relatively more able to follow through their career plans (career planning) than their counterparts (i.e., non-science oriented participants).

According to the South African Department of Basic Education (2011:8) mathematics and physical science help to develop mental processes that enhance logical and critical thinking, accuracy and problem solving that will contribute to decision-making. If the acquired skills of both mathematics and physical sciences are taken into consideration it can be assumed that learners who are enrolled in mathematics and physical sciences are able to

plan in advance and are able to make accurate and effective decisions. Career planning and decision-making are two of the dimensions of career maturity and it can be assumed that learners who are enrolled for mathematics and physical sciences are more career mature than non-scientific oriented learners, because they have acquired the necessary skills to successfully master career decision-making.

The enhanced level of career maturity of science-oriented learners may also be attributed to the fact that learners with mathematics and physical science (on the required level of achievement) are able to apply for any course on tertiary level (University of the Free State 2013:14-25). Science-oriented learners may be more career mature because of the career certainty they experience. It was indicated previously that subject choices are made for the wrong reasons which result in uninformed and limited career planning (Bholanath 2007; Mtolo 1996:7) and if this is compared to the results of the present research, it might be possible that non-science oriented subjects were chosen without keeping the vocational future in mind, indirectly causing them to be less career mature.

#### **5.4.2 Hypothesis 2**

The second hypothesis stated that learners who already have career choices score higher on career maturity than learners who do not have career choices yet. Literature has shown that career mature students are more committed to the career choice process than those who are not career mature (Watson & Stead 1997:2). This commitment is important because it encourages the career developmental tasks of crystallising (see chapter 2) and the implementation of a career choice. Van de Venter (2006:24) stated that a high level of career maturity correlates positively with informed career decision-making. Hypothesis 2 was confirmed in that learners with a definite career choice scored significantly higher on all five dimensions of career maturity. The present findings replicate previous research (Van de Venter 2006) demonstrating that career choice positively relates to career maturity. It may be



assumed that learners with definite career choices show a higher level of career maturity because they are able to demonstrate competencies in decision-making (a dimension of career maturity).

#### **5.4.3 Hypothesis 3**

Hypothesis 3 tested whether career maturity is stable over time. Previous findings would contradict this assumption since it has been shown that grade rather than age predicts career maturity more efficiently (Crites 1969). A cross-sectional research in South Africa showed that Grade 8 learners scored significantly lower on career maturity than first year students (Langley et al 1992 in Spies 1996:42). Hypothesis 3 was only partially confirmed in that a significant increase in career maturity was only shown for the career maturity dimensions self-information and career planning. No significant changes were found for decision-making, career information and integration.

#### **5.4.4 Hypothesis 4**

Hypothesis 4 proposed that learners who show large discrepancies between perceived and actual academic achievements score lower on career maturity than learners with small discrepancies. The hypothesis was in line with Osche's (2003) study which showed that academic over-estimators on average had lower marks than students who were categorised as academic under-estimators. Participants were distinguished as academic over-estimators and academic under-estimators. The majority of the participants (105) in the present study overestimated their academic achievements, while only a minority underestimated their academic achievements (25) or were realistic in estimating their academic achievements (6). The present study showed that participants who showed small discrepancies between perceived and actual academic achievement scored higher on the dimension decision-making

than those participants who showed large discrepancies. Hypothesis 4 was thus only confirmed for the dimension career decision-making.

Crites' (1973) model of career maturity includes career choice competency as a cognitive dimension of career maturity. This dimension consists of five cognitive components namely self-appraisal, occupational information, goal selection, planning and problem-solving that relates to the process of career decision-making (Crites 1973 in Miller 2006:19; see chapter 2). It can be assumed that learners with a large discrepancy between their perceived and actual academic achievements may lack the cognitive skills that influence decision making in contrast to their counterparts who show a small or no discrepancy between their academic perception and their actual academic achievement. Therefore individuals with low self-appraisal, occupational information, goal selection, planning and problem-solving should demonstrate less career choice competency which in turn should result in lower career maturity. Those who are more realistic in making career choices or perceiving their own academic ability express career maturity.

#### **5.4.5 Hypothesis 5**

Hypothesis 5 proposed that self-efficacy relates positively to career maturity. Self-efficacy refers to the perceived judgments of one's ability to perform a task with success (Bandura 1977 in Witchger 2011:44) (also see chapter 3). Research has shown that individuals with high self-efficacy are able to complete career developmental tasks more efficiently than those with low self-efficacy (De Bruin & Bernard-Phera 2002:3) and that individuals with low self-efficacy expectations might even avoid tasks completely with regard to career decision behaviour (Betz & Borgen 2000:330-331) (see also chapter 2). The results confirmed hypothesis 5 in that self-efficacy positively correlates with the career

maturity dimensions self-information, decision-making, career information and career planning.

#### **5.4.6 Hypothesis 6**

Hypothesis 6 stated that self-esteem is positively correlated with career maturity. Self-esteem as an affective structure can be viewed as a personal evaluation of who you are (Woolfolk 2007:105) and higher self-esteem, rather than low self-esteem results in more appropriate career choices (Super 1990:224). Hypothesis 6 was confirmed in that self-esteem positively related to all five of the career maturity dimensions (Langley et al 1996). This means that participants with higher self-esteem have an efficient knowledge of the importance of life roles, work values and occupational interests (self-information), have the ability to make effective decisions (decision-making), can evaluate the knowledge of the world of work (career information), can integrate information of the self with the world of work (integration) and have the ability to make career decisions and implementing it (career planning).

#### **5.4.7 Hypothesis 7**

Hypothesis 7 stated that positive possible selves stand in a functional relationship with career maturity. It stated more specifically that those participants who named positive possible selves referring to *achievement*, score higher on career maturity than those naming possible selves referring to other categories (Oyserman 2004). To date no research was found that established this functional relationship between positive possible selves (achievement) and career maturity. Hypothesis 7 was confirmed in that learners who named the positive possible selves *achievement*, scored significantly higher on the career maturity dimensions of self-information, career information and integration but not on the dimensions decision-making and career planning. Achievement-oriented learners are therefore career

mature individuals who show more skills in understanding who they are (self-knowledge), what their choice of career entails (career information) and the integration thereof.

#### **5.4.8 The relationship between independent and dependent variables**

Regression analysis suggested that the strongest predictors were career choice and self-esteem; while a marginal yet significant predictor was self-efficacy. This means that career maturity is best predicted by the certainty individuals have pertaining to a specific career choice, as well as self-esteem which is the personal view an individual has of him/herself.

### **5.5 SUMMARY**

In chapter 5 the results of the tested hypotheses were reported and the three most significant predictors, namely career choice, self-esteem and self-efficacy were identified. These results were discussed within the theoretical frameworks of Super (1957), Crites (1969) and Langley (1988) as well as the literature review where applicable. The next chapter will provide the conclusions and recommendations of the current research.

## CHAPTER 6

### CONCLUSION and RECOMMENDATIONS

#### 6.1. INTRODUCTION

Chapter 1 served as an introduction to the present study as it outlined the problem statement, research questions, research aims and the objectives of the present research study. First, the current research aimed to determine the various factors that influence school-going girls' career maturity. Subject choice (science-oriented vs. non science-oriented) and career choice were considered as the contextual factors; while grade, perceived and actual academic achievement, self-efficacy, self-esteem and possible selves were considered as the biological and psychological factors that predict career maturity. The first research question was therefore: "What are the factors that predict the career maturity of school-going girls?" Secondly, the present research focussed particularly on the psychological construct of possible selves as no previous research addressing its impact on career maturity was identified. It was hypothesized that learners who report positive possible selves referring to *achievement*, would score higher on career maturity in comparison to learners reporting possible selves related to the other categories namely *interpersonal relationships*, *personality traits*, *physical/health related*, *material/lifestyles* and *negative* (see section 4.4.6). The second research question based on the second aim was: "Does the factor possible selves significantly predict the career maturity of school-going girls?" A cross-sectional survey was conducted to address the first and second aim of the present research.

The third aim was to assess the stability of career maturity which was assumed to express itself in the lack of change when an individual progresses from one grade to the next. The third research question was consequently: "Does career maturity remain stable as school-going girls progress from one grade to the next in the absence of a career guidance

intervention programme?” In order to address this aim a longitudinal research survey design was applied.

The sample consisted of a homogenous group consisting of female learners from a school in Pretoria and therefore contextual factors like socio-economic status, family and culture and the biological factors age and gender were considered as stable.

Chapter 2 elaborated on the theoretical frameworks of Super (1957), Crites (1969) and Langley (1988). Chapter 3 served as a literature review and in chapter 4 the research design, proposed hypotheses, sample, data collection methods, ethical considerations and measurements were explained. Chapter 5 provided the results generated by the cross-sectional and longitudinal design and the seven proposed hypotheses’ final results were reported and discussed. Chapter 6 will conclude the research including a summary of the theoretical framework, literature review and the empirical findings. It will also deal with the contribution, limitations and recommendations of the present research.

## **6.2 SUMMARY OF THEORETICAL FRAMEWORK AND LITERATURE REVIEW**

Chapter 2 elaborated on the theories pertaining to career maturity including the work of Super (1957), Crites (1969) and Langley (1988). Career maturity was defined as the readiness an individual has to make an effective career choice (Super 1957). Langley’s theory of career maturity and development of the Career Development Questionnaire that measures career maturity formed the core of the current research. Chapter 3 served as a literature review summarising the various factors and research outcomes pertaining to these factors. The contextual factors culture, socio-economic status, family, subject choice and career choice were discussed and the biological and psychological factors age, gender, grade, perceived and actual academic achievement, self-efficacy, self-esteem and possible selves were reviewed. It was found that the contextual factors, subject choice (Packard & Nguyen

2003:251) and career choice (Crites 1973 in Miller 2006:19; Langley 1988:8; Langley et al 1996:4; Patton & Lokan 2001:31) show a positive relationship with career maturity. The biological and psychological factors namely age (Langley 1988; Miller 2006:23), school grades (Crites 1969), self-efficacy (De Bruin & Bernard-Phera 2002:1; De Raaf et al 2009:3), self-esteem and self-concept (Crites 1969) as well as perceived and actual academic achievement (Coetzee 2011:41) also showed a positive relationship with career maturity.

### **6.3 SUMMARY OF THE EMPIRICAL FINDINGS**

Quantitative research methods were used to test the seven proposed hypotheses as put forward in chapter 4 (see section 4.2). A cross-sectional survey design was applied to determine the relationship between the construct career maturity and the contextual factors subject choice, career choice and the biological and psychological factors self-efficacy, self-esteem, perceived and actual academic achievement and possible selves. The factors career choice and subject choice showed a positive relationship with career maturity. Participants who under-estimated or realistically estimated their academic achievements scored higher overall on career maturity than those participants who over estimated their academic achievements. Higher levels of self-efficacy, self-esteem and achievement-oriented possible selves also correlated positively with the construct career maturity. The two most significant factors that predict the dependent variable career maturity were career choice (explained 21% of the variance) and self-esteem (explained 9% of the variance). Self-efficacy (explained 4% of the variance) showed marginal significance and the category achievement of the positive possible selves only explained 2% of the variance of the dependent variable career maturity (see section 5.3.8).

A longitudinal survey design was applied to determine whether career maturity remains stable as learners progress from one grade to the next without any form of

intervention. Participants scored higher on the career maturity dimensions self-information and career planning (Langley et al 1996) at time 2 in comparison to time 1 (see section 4.3.3). The career maturity dimensions decision-making, career information and integration showed no significant changes (see section 5.3.3) and therefore career maturity showed partial stability as learners progressed from one grade to the next.

#### **6.4 CONTRIBUTION OF THE STUDY**

The first contribution the study makes refers to the replication of previous findings. The current research confirmed previous research in that the factors subject choice (Packard & Nguyen 2003), career choice (Langley 1988; Langley et al 1996; Patton & Lokan 2001), school grade (Crites 1969), perceived and actual academic achievement (Coetzee 2011), self-efficacy (De Bruin & Bernard-Phera 2002) and self-esteem (Crites 1969) show a positive relationship with career maturity. This strengthens the hypothesis that career maturity is determined by certain cognitive and/or affective factors.

The study's second contribution refers to the understanding of the relationship between positive selves, more specifically the category *achievement*, and career maturity. The current research showed that possible selves only explained 2% of the variance of career maturity and was therefore not as significant as was initially anticipated. Possible selves in relation to career maturity had not been researched before and the findings of the current research might encourage future investigations related to possible selves and career maturity.

#### **6.5 LIMITATIONS OF THE PRESENT STUDY**

The present study was conducted in one school which is not representative of South Africa. The convenience sampling technique as well as the small sample size ( $n = 142$ ) are the main limitations towards the generalizability of the findings. The findings cannot be generalized to all girls in Gauteng because of various factors like the school being single-



gendered, the assumed homogenous socio-economic status of the girls and the majority culture of the girls in the school.

A second limitation of the present research is related to the correlative nature of the research. Correlations do not explain causality and therefore longitudinal research in future might be valuable in order to establish how career choice, subject choice, perceived and actual academic achievement, self-efficacy, self-esteem and positive possible selves are related to career maturity. A longitudinal approach would also be valuable in addressing the salience of the abovementioned factors in the course of the development of career maturity based on the developmental stages as put forward by Super (1957).

The questionnaires were administered in English, the language of education and not the participants' mother tongue. In the reliability analysis of the general self-efficacy scale the items with "If-sentences" showed very low corrected item-total correlations. It was mentioned in section 4.4.4 that it was assumed that these items were not understood due to possible language barriers.

Various assumptions were not controlled and certain inferences were made. An example of such an assumption was about the parents at Loreto Convent School in relation to the self-esteem of their daughters, stating that they are supporting their children to achieve their goals (Miller 2006:24-25). These assumptions may be biased. A questionnaire for parents may be included in future studies in order to control for the impact of parents on their daughters' self-esteem and how this influences career maturity.

## **6.6 RECOMMENDATIONS**

Based on the theoretical framework (see chapter 2), the literature review (see chapter 3) and the empirical findings of the current research (see chapter 5), the following recommendations are suggested:

### **6.6.1 Practical implications**

The factors career choice and self-esteem were the two most significant predictors of career maturity in the current research. Any intervention programme that aims to increase career maturity should therefore focus on career choices. Career guidance counsellors or life orientation educators should initially start career guidance with clear career choices. Only after a career choice was made by the learners should they make the relevant subject choices that will enable them to pursue the specific careers. A programme that guides learners in choosing what they want to become in the future, might contribute significantly in identifying careers. Working from these identified concrete career goals and identifying the relevant subjects will enable learners to achieve these specific vocational goals. This will indirectly result in a higher level of career maturity and a lower dropout rate at post-school level as pointed out by the Council on Higher Education (2013:15; see section 1.1).

Extended career interventions should be implemented over a period of time introducing different constructs that influence career maturity. Constructs like career choice, perceived and actual academic achievement and the possible selves may be included in such a programme, commencing in Grade 8 continuing to the end of Grade 9.

Career intervention programmes should furthermore address the self-knowledge of learners in order to teach them to be more realistic about the way they assess themselves in the present and in the future. This is especially applicable to the perception learners have of their academic abilities and their actual academic achievements. If learners are realistic in the estimation of their academic abilities, it will enable them to be realistic about the careers they choose which might result in higher career maturity.

The South African Department of Higher Education and Training aims at improving the post school system in future. The focus of improvement will be on the integration of

traditional universities, universities of technology, comprehensive universities, private training colleges, as well as the new envisaged technical and vocational education and training institutes (which will operate in the form of community colleges) (South Africa 2013). Employers and in-service- training facilities will also be integrated into the above mentioned post school system so that students can engage in the world of work with experience and competence. The system aims at avoiding the academic “dead ends” many learners and students experience after completing school or tertiary studies. Instead it will create a diversity of opportunities where learners and students can continue or change their careers as they progress from one level of education to the next, or from one institution to another, and later continue (with practical experience) into the world of work. The inclusivity of previously disadvantaged groups related to race, gender and disability (South Africa 2013) will also be prioritized. The above-mentioned educational opportunities, as well as the envisaged increase in student numbers, may cause school-going individuals to show higher levels of career maturity because of the numerous career choices that will be available.

### **6.6.2 Recommendations for future research**

The psychological predicting factors that formed part of hypotheses 4 (perception of and actual academic achievement), hypothesis 5 (self-efficacy), hypothesis 6 (self-esteem) and hypothesis 7 (positive possible selves) can be categorized as either cognitive structures or affective structures. The cognitive structures in the current research are perception of academic achievement (Bong & Clark 1999), self-efficacy (De Bruin & Bernard Phera 2002) and positive possible selves (Myers 2009). The affective structure is self-esteem (Hewitt 2009). The question future research (cross sectional and longitudinal studies) should address is whether the proposed distinction between cognitive and affective structures is useful in improving our understanding of career maturity. Coertse and Schepers’ (2004:71-72) research showed that more personality correlates e.g., self-confidence, self-esteem, self-

control, assertiveness and spontaneity etc., than cognitive correlates like e.g., cognitive ability, predict career maturity. Further research including the cognitive factors perception of academic achievement, self-efficacy and possible selves (including all the categories *achievement, interpersonal relationships, personality traits, physical/health related, material/lifestyles* and *negative* ) (Oyserman 2004:4-7) might broaden the existing perceptions of how cognitive constructs affect career maturity. A better understanding of career maturity and its relationship to cognitive and/or affective constructs will result in more effective career guidance interventions, thus improving career maturity.

A future replication of this research with much larger and more diverse samples of South African schools controlling for gender, socio-economic status, family and culture will increase the generalizability of such a research.

There is a need for future research on career maturity using instruments other than the Career Development Questionnaire. When identifying instruments that measure career maturity, the possibility of language barriers and diverse cultural beliefs should be kept in mind. This is especially relevant within the South African context (Langley 1988).

According to Super's theory (1957) the exploratory stage of career development starts at the age of 15 (Grade 9) and ends at the age of 25 years. The growth stage that deals with the awareness of a career, success at school and acquiring initial work habits and attitudes ends at the age of 14 years (also Grade 9). Future research that explores how individuals deal with career decision-making between the growth stage and exploratory stage may result in a more profound understanding of how the career maturity of individuals is affected during this interim time. The design and implementation of a career guidance programme dealing with career decision-making in Grade 9 may result in increased career maturity of these individuals.

## 6.7 CONCLUSION

The first aim of the present study was to establish which of the following factors relate to career maturity: subject choice, career choice, grade, perceived and actual academic achievement, self-efficacy, self-esteem and positive possible selves. The results of the cross-sectional survey showed that the contextual factors career choice and subject choice stand in a positive relationship with career maturity. It was found that those participants with a definite career choice and the science-oriented learners demonstrated higher levels of career maturity. With regards to the psychological factors, perceived and actual academic achievement, it was found that under-estimators and realistic estimators scored higher on career maturity than over-estimators. Learners with higher levels of self-efficacy and self-esteem showed higher levels of career maturity. Participants with achievement-oriented possible selves also correlated positively with career maturity. The factors that best predict career maturity were career choice and self-esteem and the factor with marginal significance was self-efficacy.

The second aim was to introduce the construct positive possible selves, specifically the category achievement in relation to career maturity. Although there was a relationship between the possible selves' category *achievement* and career maturity, possible selves as a whole was not significant in predicting career maturity, when compared to the other contextual and biological/psychological factors.

The third aim of the present study was to assess the stability of career maturity as learners progress from one grade to the next. It was found that two of the five dimensions (self-information and career planning) of career maturity showed a significant increase from one grade to the next in the absence of a career intervention programme.

The factors career choice, self-esteem, self-efficacy and positive possible selves can be utilised in future career guidance intervention programmes to increase the level of the construct career maturity. There is a need to increase career maturity as it was assumed by the researcher that lower career maturity levels may be related to the high dropout rates, especially of first year students in South Africa (Council on Higher Education 2013). It was suggested by the researcher that the increased educational opportunities associated with the future diversification of tertiary institutions (Department of Higher Education 2014) will have a positive effect on the career choice certainty young individuals have. Higher levels of career choice will result in higher levels of career maturity, especially for individuals from disadvantaged communities, female learners, disabled learners and other minority groups. These increased educational opportunities together with efficient career guidance interventions at schools (introduced in Grade 9) including the factors career choice and self-esteem, may result in the increase of career maturity of learners in general, and more specifically, female learners. The researcher hopes that this research contributed to the overall understanding of career maturity by identifying the factors namely career choice, self-esteem and self-efficacy that predict career maturity. The introduction of possible selves in relation to career maturity in the current research may hopefully spark an interest in other researchers, eventually resulting in more investigations related to these two constructs.

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## **APPENDICES**

# **APPENDIX A**

## **ETHICAL CLEARANCE**





## Research Ethics Clearance Certificate

This is to certify that the application for ethical clearance submitted by

**S Buys [30474523]**

for a M Ed study entitled

**The factors that relate to career maturity of school-going-girls in Gauteng: a case study**

has met the ethical requirements as specified by the University of South Africa College of Education Research Ethics Committee. This certificate is valid for two years from the date of issue.

Prof KP Dzvimbo  
Executive Dean : CEDU

Dr M Claassens  
CEDU REC (Chairperson)  
[mcdtc@netactive.co.za](mailto:mcdtc@netactive.co.za)

Reference number: 2014 MARCH/30474523/MC

18 March 2014

## **APPENDIX B**

**Postnet Suite 302  
Private Bag X06  
Waterkloof  
0145**

**Mr S Shillinglaw  
Loreto Convent School  
135 Nina Sita Street  
Pretoria**

**DATE: .....**

**RE: Permission to conduct research**

**Dear Mr Shillinglaw and Loreto Convent School Management Team,**

My dissertation titled: **“The factors that relate to the career maturity of school-going girls in Gauteng”** forms part of my Master’s Degree in Educational Psychology at Unisa. Briefly defined, Career maturity refers to an individual’s readiness to make informed, age-appropriate career decisions.

The purpose of this research is to determine how self-esteem, self-efficacy and the possible selves, school subjects (subject choice) and academic achievement relate to career maturity. This research is not intended to develop an intervention programme; instead, it is to identify certain factors that relate to career maturity.

I kindly request your permission to include the **Grade 10, 11 and 12 girls** in my research.

The girls will be required to do the following:

- 1) Indicate their subject choice and academic results obtained for 2012
- 2) The completion of questionnaires will include:
  - *Biographical information, such as, age, grade, gender and subjects.*
  - *The General Self-efficacy Scale*
  - *The Rosenberg’s Self-Esteem Scale*
  - *The Career Development Questionnaire that measures Career Maturity*
  - *The possible selves Questionnaire*

I undertake to do the following:

- The research will not interfere with the schoolwork of the learners.
- The research will be conducted in a professional manner at all times.
- All information will be kept **strictly confidential**.
- The research results will be made known to the school in 2014.
- The research results will determine the suggestions given in order to improve career maturity at Loreto Convent School.
- Each learner will be given her career maturity score obtained from the Career Development Questionnaire (in other words her Career Maturity level) in a

short generic report in conjunction with general suggestions as to how she can improve her career maturity.

- Participation in the research is completely voluntary.
- A learner may discontinue with the research at any stage if she so wishes.
- A learner will only be permitted to participate in the research once she has provided the researcher with a signed reply slip from her parents indicating that consent has been given as well as her own signed assent form.
- A copy of the learner's signed assent form will be given to the learner's parents.
- The research procedure will be explained in detail and answers will be given to any questions in order to clear up any uncertainties.
- The learners may contact me during school breaks at the Career Guidance Centre if they have any questions regarding the research.
- Times will be allocated to the completion of the questionnaires and these time slots will be communicated to the learners.

Thanking you in advance.

**Yours Sincerely**

.....  
**Sulize Buys**

*UNISA Student Number:*

*30474523*

*Telephone number:*

*082 448 5504*



## Loreto Convent School

135 Skinner Street, Pretoria • PO Box 11381 The Tramshed 0126 • Tel - School Office 012 326 6342 \*012 326 6753 \*012 321 6880  
Fax-Accounts 012 326 6351 • Fax 012 324 2780 • E-mail kathy@lorskin.co.za

31 July 2012

To whom it may concern;

RE: Mrs.Sulize Buys

ID Number: 7506070009088

Unisa Student Number: 30474523

Mrs.Sulize Buys has my permission to conduct her research for the degree M.Ed  
Guidance and Counselling (Unisa) here at Loreto Convent School.

Yours Sincerely

Mr.Shillinglaw

SCHOOL PRINCIPAL



*Learning and leading in love and justice*

P.B.O. 18/11/13/2808

# **APPENDIX C**

## **Example of Parent Consent Form**

**DATE:**.....

**Dear Loreto Parent,**

As a Master's student at UNISA (Guidance and Counselling), I am required to conduct research for my dissertation titled: **“The factors that relate to career maturity of school-going girls in Gauteng”**. Career maturity refers to an individual's readiness to make informed, age-appropriate career decisions. Loreto Convent School and the UNISA ethical clearance committee kindly gave me permission to conduct this research. It will take approximately two years to complete my dissertation.

The purpose of this research is to determine which factors influence girls' ability to make appropriate career choices.

Factors that will be investigated include:

- Self-esteem
- Self-efficacy
- Possible selves
- Subject choices
- Academic achievement
- Age

All the Grade 10, 11 and 12 learners of Loreto Convent School are invited to participate in this research and I hope to involve at least 150 girls in this survey.

Your daughter is kindly invited to participate in this research by completing very easy questionnaires. She will be required to include her Biographical information, such as, age and gender. She will complete the Career Development Questionnaire (which measure Career Maturity), the General Self-efficacy Scale, The Rosenberg Self-esteem Scale, The Possible Selves Questionnaire, as well as her subject choices and academic results. The completion of these questionnaires will take

approximately 90 minutes. These questionnaires will be completed during school as soon as I have arranged an appointment with her.

Please take note that:

- All data and information will be kept strictly confidential at all times.
- Her identity will not be disclosed to anyone.
- She is not obliged to take part in this research.
- She may withdraw at any time.
- She may ask questions at any time if something is unclear to her.
- There is no risk or discomfort involved in the completion of the questionnaires
- I may be contacted at the school during breaks in the Career Guidance Centre regarding any concerns or may be phoned at 012 – 326 6342 (Loreto Convent School) during school hours.
- You will receive a copy of your daughter's signed assent form.
- I will provide your daughter with a short generic report indicating her personal Career Maturity Level at the end of the research.

I kindly ask for your permission to include your daughter in this research.

Thank you in advance for you co-operation.

**Yours sincerely**

.....

**Mrs Sulize Buys**

**Researcher/ Loreto Convent School Staff member**

---

## **REPLY SLIP**

I, ..... parent of .....

in Gr. ...., give consent to Mrs Buys to include my daughter in her research.

(Signature).....

(Date) .....

# **APPENDIX D**

## **Example of Learner Assent Form**

**Date.....**

**Dear Loreto Learner,**

As a Master's student at UNISA (Guidance and Counselling), I am required to conduct research for my dissertation titled: **"The factors that relate to career maturity of school-going girls in Gauteng"**. Career maturity refers to an individual's readiness to make informed, age-appropriate career decisions.

The purpose of this research is to determine which factors influence girls' ability to make appropriate career choices.

You are kindly invited to participate in this research by completing very easy questionnaires. These questionnaires will be completed during school as soon I have arranged an appointment with your class and Life Orientation educator.

Please take note of the following:

- All data and information will be kept strictly confidential at all times.
- Your identity will not be disclosed to anyone.
- You are not obliged to take part in this research.
- There is no risk involved in this research.
- You may withdraw at any time.
- You are required to inform your parents about the research and they have to sign the reply slip on the attached consent form.
- Your parents will receive a copy of this signed form.
- You may ask questions at any time if something is unclear to you.
- You may contact me at the school during breaks, in the Career Guidance Centre, if you have any concerns regarding this survey.
- You will be provided with a short generic report indicating your personal Career Maturity Level at the end of the research.

Thanking you in advance for your co-operation.

**Yours sincerely**

.....

**Mrs Sulize Buys**

**Researcher**

---

**Reply Slip**

I, ..... in Grade.....

agree to take part in Mrs S Buys' research at Loreto Convent School.

I admit that:

- I understand what the research entails.
- My parents have given their consent.
- I am participating at my own discretion.

**Signature:** ..... **Date:** .....



# **APPENDIX E**

Vertroulik  
Confidential

2491

## **Loopbaanontwikkelingsvraelys (LOV) Career Development Questionnaire (CDQ)**

---

**Raad vir Geesteswetenskaplike Navorsing  
Human Sciences Research Council**



# **APPENDIX F**

**SULIZE BUYS  
30474523**

**UNISA  
DEPARTMENT OF EDUCATIONAL STUDIES  
2013**

**M. ED GUIDANCE AND COUNSELLING**

***THE FACTORS THAT RELATE TO CAREER MATURITY OF  
SCHOOL-GOING GIRLS IN GAUTENG: A CASE STUDY***

**Supervisor  
Prof E Gouws**

The questionnaire that you are going to complete, concerns you as a person. It is not a test, but merely an information exercise. There is no correct or incorrect answer. Answer the statements honestly and not according to how others would expect you to. The information is processed by a computer. Your answers are confidential and no one has access to your answers. Please answer every question and do not leave any question out. Thank you for your valuable participation in this research.

Please write down your appropriate answer in the space provided next to each question.

**Participant Code** \_\_\_\_\_

1 Gender (boy = 1; girl = 2) \_\_\_\_\_

2 State your age (in years). \_\_\_\_\_

3 In what grade are you at present? (11 or 12) \_\_\_\_\_

4 Do you know what career you want to pursue?  
Yes = 1                      Uncertain = 2                      No = 3                      \_\_\_\_\_

5 Do you want to study at a tertiary institution?  
Yes = 1                      Uncertain = 2                      No = 3                      \_\_\_\_\_

6 Do you know what you want to study?  
Yes, I know = 1                      Uncertain = 2                      No, I don't know = 3                      \_\_\_\_\_

7 If your answer is yes at nr 6, what do you want to study?  
\_\_\_\_\_

Read the statements in the table on the next page and make a cross in the square under the response that best applies to you. There are no wrong or right answers.

STATEMENT		Strongly agree	Agree	Neither/ Nor	Disagree	Strongly disagree
8	I can always manage to solve difficult problems if I try hard enough					
9	If someone opposes me, I can find the means and ways to get what I want					
10	It is easy for me to stick to my aims and accomplish my goals					
11	I am confident that I could deal efficiently with unexpected events					
12	Thanks to my resourcefulness, I know how to handle unforeseen situations					
13	I can solve most problems if I invest the necessary effort.					
14	I can remain calm when facing difficulties because I can rely on my coping abilities.					
15	When I am confronted with a problem, I can usually find several solutions.					
16	If I am in trouble, I can usually think of a solution.					
17	I can usually handle whatever comes my way.					
18	I feel that I am a person of worth, at least on an equal plane with others.					
19	I feel that I have a number of good qualities.					
20	All in all, I am inclined to feel that I am a failure					
21	I am able to do things as well as most other people					
22	I feel I do not have much to be proud of					
23	I take a positive attitude toward myself					
24	On the whole, I am satisfied with myself					
25	I wish I could have more respect for myself					
26	I certainly feel useless at times.					
27	At times I think I am no good at all.					

## Possible Selves Questionnaire

Who will you be next year? Each of us has some image or picture of what we will be like and what we want to avoid being like in the future. Think about next year -- imagine what you'll be like, and what you'll be doing next year.

- In the lines below, write what you expect you will be like and what you expect to be doing next year.
- In the space next to each expected goal, mark NO (X) if you are not currently working on that goal or doing something about that expectation and mark YES (X) if you are currently doing something to get to that expectation or goal.
- For each expected goal that you marked YES, use the space to the right to write what you are doing this year to attain that goal. Use the first space for the first expected goal, the second space for the second expected goal and so on.

In the future, I expect to be	I am doing something to be that way		If yes, What am I doing now to be that way in the future?
	NO	YES	
(P1) _____			(s1) _____
(P2) _____			(s2) _____
(P3) _____			(s3) _____
(P4) _____			(s4) _____

In addition to expectations and expected goals, we all have images or pictures of what we don't want to be like; what we don't want to do or want to avoid being. First, think a minute about ways you would **not** like to be next year -- *things you are concerned about or want to avoid being like*.

- Write those concerns or selves to-be-avoided in the lines below.
- In the space next to each concern or to-be-avoided self, mark NO (X) if you are not currently working on avoiding that concern or to-be-avoided self and mark YES (X) if you are currently doing something so this will not happen next year.
- For each concern or to-be-avoided self that you marked YES, use the space at the end of each line to write what you are doing this year to reduce the chances that this will describe you next year. Use the first space for the first concern, the second space for the second concern and so on.

In the future, I want to avoid	Am I doing something to avoid this?		If yes, What am I doing now to avoid being that way in the future?
	NO	YES	
(P5) _____			(s5) _____
(P6) _____			(s6) _____
(P7) _____			(s7) _____
(P8) _____			(s8) _____

Please write down your academic results for November /December 2012. Write down the percentages you achieved for your subjects in the space provided.

### School subjects

Subjects		%	
1	English		
2	Afrikaans		
3	Mathematics		
4	Mathematical literacy		
5	Life Orientation		
6	Business Studies		
7	Accounting		
8	Life Science		
9	Physical Science		
10	Geography		
11	History		
12	Drama		
13	Computer Application Technology		